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# BULLETIN

OF THE

## ESSEX INSTITUTE.

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VOL. 15. SALEM: JAN., FEB., MARCH, 1883. Nos. 1, 2, 3.

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### SWEDISH SUPERSTITIONS AND CHARACTERISTICS.

BY ALBAN ANDREN.

READ MONDAY, JANUARY 1, 1883.

*CDL*  
*E75B*

You find among the Swedes many peculiar superstitions, which seem to cling with great tenacity from by-gone times. So, for instance, it is the custom for chambermaids or others, making the beds in the morning, not to leave an unfinished bed under any pretext to go to any other work, for fear that the person that is to occupy it may not rest easily. In most Swedish stables you will find a dead crow or blackbird hung over each horse, which is considered a sure prevention for the evil one riding the horse in the stable at night, and it is asserted by the farmers that when such prevention is not taken the horses are found in the morning foaming at the mouth, sweaty and blowing hard, as if just arrived from a furious drive. In my boyhood, whenever a person sneezed it was considered polite for bystanders to say "God save you" or "Prosit;" and the more popular a person was in society the more people were ready to say "God save you" in case of sneezing. At an evening party, a society belle, after being duly coaxed, would sit down and commence fingering the

ivories of a piano, and it was ludicrous enough if she happened to sneeze to see about a dozen young men and old men make deep bows, and seriously exclaim in chorus, "God save you, Mademoiselle," she returning the compliments with a gracious "Thank you, sirs." This custom is still retained among the Irish, who say "bless you" or "save you" on similar occasions. It is said that centuries ago a contagious disease passed over Scandinavia and northern Europe, which commenced with sneezing, and after sneezing a few times it ended fatally; and naturally under such circumstances the friends of the sneezers would exclaim "God help you" or "save you," and thus it came to be handed down from one generation to another, until it became a standard form of etiquette. It is now, however, growing out of fashion. In families, particularly among the fair sex, it is a sure sign of becoming angry and hot-tempered during the day if the nose itches in the morning; also, if the palm of the left hand itches, you are to receive money, and if it is the right hand you have to pay out money during the day.

If the left eye itches, a lady caller may be expected, and if it is the right eye, then a gentleman is sure to call during the day.

One saying is, never point an empty gun at anybody, for the evil one may load it; and further, never make a wry face, for if the clock should strike twelve, the wind change, and the cock should crow at the same time, your face will forever remain in that ugly condition.

Many poor students manage to get through the elementary and regular colleges by the aid of charity meals, which is done in this way:

A student calls at your house and asks that you will invite him once a week to your table, dinner or supper; and after getting such permission in one family he goes to another and asks a similar privilege, and so on until he

has secured free dinners and suppers for the whole week during the term. No shame seems to be attached to this free lunching ; and as a rule, each family tries to set a better table on poor students' day than on any other, although there are exceptional cases in which the reverse is done.

Some of the shining lights among the Swedish professional men have passed through college by the aid of such charity meals, and are not ashamed to confess it.

If there is one class of people that ought to be prosperous in Sweden, it is the hatters, for owing to the Swedish etiquette of uncovering your head in the street to mere passing acquaintances, the brim of the hat soon wears out ; and an American gentleman, lately returned from Sweden, told me that the next time he goes over there, he surely should get a silk hat made with a sheet iron brim, to enable it to stand the strain put upon it by the demands of the prevailing etiquette. Even two brothers, and chums, as we say here, when they meet in public, take off their hats at meeting and parting with a great deal of reverence. Your own servants meet you in the street, and as they doff their hats or make a courtesy, you are expected to raise your own in return. It is also the etiquette, if parties pass each other on the left to raise their hats with their right hands, and *vice versa*, so as not to obscure your face from your friend in raising the hat. In going into offices, stores, restaurants, bar-rooms or billiard saloons, the Swede uncovers his head just as reverently as if going into church. In the country the farmers and peasants generally uncover their heads in going by churches or cemeteries, as a mark of respect.

Writers on Sweden have said that no real deep religious sentiment exists in that country, and this is equally true, I think, wherever state and religion are united, for in Sweden you *must* be baptized when two years old, whether you want to or not. You may bawl and kick all you like

but baptized you must be ; there is no getting away from that. At fifteen you must join the church and be confirmed, and at that age you have ceased to be rebellious and fall in to the traces with proper grace. Then you ought to go to the sacrament at least once a year, and you may forfeit certain citizens' rights should you not have been to such holy communion for a period of five successive years. Thus you see that religion and business are, as it were, closely linked together, and by degrees you begin to perform your religious duties in a sort of automatical manner, very reposing both to body and mind. Any undue excitement in religious matters, such as noisy revivals, etc., is not enjoyed by the better classes of Swedes, although foreign missionaries, particularly Swedish-Americans, occasionally do a little missionary work among the country people in this line, and it would be a great deal better for the peace of the country if they would confine their labors to fields more ripe for the harvest.

The Swedish barber is a man of no little importance, as in addition to the usual duties of hairdresser, wig-maker, and barber, he has to pull teeth, set leeches, attend to bleeding and cupping, and occasionally, practises a little surgery if he has passed examination in that line. Never shall I forget my first experience in having a tooth pulled by a Swedish barber. I went up the stairs to his rooms, but in taking hold of the door-knob, the tooth-ache disappeared, and I went down to the street again, when the ache commenced worse than ever. I returned, although the same miracle was repeated when I got to the door again. I made bold to enter. He was alone, that man of torture, and, after looking me over, he asked me to sit down on the floor near the window, and took out from a drawer a mysterious tool, looking very much like a large corkscrew ; with this he took hold of the tooth, standing over me with one hand resting on the top of my head, and with the other



pointing upwards, just as you pull a cork from a quart bottle. After getting one-half of the tooth out, the door opened, and in came a man to be shaved, and the barber asked me to wait till he had shaved the customer, when he would try again. I sat on the floor waiting till the man was shaved, when the barber commenced almost the same operation, almost lifting me from the floor, until at last his efforts were crowned with a glorious success. The charge was about ten cents. Some years afterwards, an American dentist from Philadelphia settled in Gothenburg, and fitted up luxurious parlors with operating chairs and all the modern Yankee fixings, and everybody predicted a quick failure if he meant to keep to dentistry alone, without doing some shaving, hair-cutting, and wig-making, with occasionally a little leeching, bleeding and cupping; but to the astonishment of all, he built up a large practice, and others, following in his wake, have now in a great measure relieved the barber from his primitive method of dentistry. "Allah be praised!"

Easter eve is celebrated by a family gathering and a late supper, consisting of boiled rice and hard and soft boiled eggs, with the usual allowance of wine.

A story is current in Sweden of a charity student being invited at such Easter eve supper to the family in which he had his free meals; before him stood the large deep bowl filled with the customary boiled rice, and on either side a decanter of wine. The room was lighted by two candles on the table, and in snuffing them both were accidentally put out, and the maid sent out to the kitchen to relight them; when all were in darkness the student thought he would improve the opportunity to take a long draught from one of the wine decanters, and after doing so he set it down softly on the table, but when the lights were brought in, it was found to the astonishment of all that instead of putting the decanter back again on the table, he

had placed it deep in the middle of the bowl of rice before him. Tableau: French leave, and no more free meals for the unlucky student in that family.

When darkness sets in on Easter eve, you will see all the hills lighted up by great bonfires which are kept up till sunrise on Easter day. This is done in memory of an old superstition that the devil and witches had full sway on the earth during the days the Savior laid in the grave, and particularly on Easter eve it was said that the witches by riding on brooms through the air would congregate on the hill-tops and concoct evil doings for the human race, and to keep them away the superstitious people would light every available hill-top with rousing bonfires.

As the witches are all dead long ago with the exception of their flaxen-haired and blue-eyed fair descendants which the Swedes don't want to scare away, you see there is no actual need at the present time to keep up these Easter bonfires, except as a time-honored custom, and it is one of the features of Easter eve for families to go out to look at the display of bonfires in the evening, after supper.

The 25th day of June, in Sweden, is St. John's day, or midsummer day, and is one of the most social and enjoyable holidays in Sweden. The evening before is midsummer night, which is celebrated by decorating of May-poles, around which the peasants dance till early dawn. Months before this festival, the peasant girls will save the egg-shells by carefully blowing out the contents; such empty egg-shells are strung on a twine like beads on a string and the green covered May-pole is wound spirally by such egg-shells, looking at a distance like white pearls on a dark green ground, and has a very pretty effect. Besides this the May-poles are dressed with flowered hoops, garlands and bright ribbons, and for a couple of months afterwards you will see the May-pole standing on the village green as a monument of a joyous and happy occasion.

It is not without interest, once in a while, to find out what other people think of us. By us, I mean we Americans.

On leaving England, where I lived a year and a half I was told by the cashier of the iron establishment where I worked in Lancashire, that the Americans were very queer people ; and he asked me if I had bought a revolver to take with me to Boston.

I said no ; for I confessed I did not know how to use one, and I was afraid I would do myself more damage than good, and he said he was very sorry, for he knew I would not have a very long lease of life in New England without one.

I have been here about fourteen years, from Maine to Illinois, from Canada to North Carolina, and to the honor of this country, I want to say I never owned one and never had the need of that weapon during this long time. He also stated very seriously that if I went to churches in New England, I would see the men resting their feet on the top of the pew in front, and that they were in the habit of smoking pipes while in church. The first time I went into a New England church, I sat anxiously waiting to see the men put their feet on the pew in front and pull out their pipes, but I was very agreeably disappointed, and I have come to the conclusion that the New Englanders, although they are a young race, are almost as civilized as the people of Great Britain.

I also heard of a German who emigrated to this country and afterwards married an estimable young American lady, at which his parents were very much distressed ; and when some years afterwards he travelled with his wife to see the old folks, they were greatly relieved at seeing the young wife ; for they said, we thought all the time that coming from the United States she must be black, and she is just as good-looking as we are.

Now the ordinary Swedes also have a very imperfect

knowledge of this country, that is, as to its extent and relative location of cities and states. This is not to be wondered at, for the same I believe is true as to the general American knowledge of the localities in Sweden; and what care we here for the relative position of such hard-sounding names of Swedish counties as Bohuslän, Dalsland, Westergötland, Östergötland, Kalmar, Skaane, and Småland; so you must not think that we Swedes are very ignorant and verdant because we do not know the geography of the United States, and this the more, as in our Swedish school atlases, Sweden and Norway occupy a couple of double pages, whereas only a small portion of a page is devoted to the whole of North America, and we naturally come to the conclusion that distances in the United States are small as compared with Sweden, and it is only by travelling through the United States that we get a proper idea of the vast extent of the country. I make this explanation that you may understand what follows: about fourteen years ago, when I left Sweden for the United States, a number of friends called on me and said they had heard I was going to Boston, U. S. A., and would I be so kind as to take a letter and message with me for some relation or friend of theirs. Oh, yes. I took about twenty-five letters addressed to persons in Illinois, Wisconsin, Minnesota, and New Sweden, Maine, my friends saying that such places were not far from where I was going, and they and I had an idea that they were all suburbs of Boston, and that it would be a pleasure to deliver the letters in person.

When I arrived in Boston, I met an American gentleman to whom I had a letter of introduction, and after taking dinner with him, he asked me what I meant to do. I said I was going to work in a day or so, but that I had first a number of letters to hand round to friends in the suburbs of Boston, and I would be obliged to him if he

would tell me what kind of horse-cars to take to reach such places. He said certainly, "please show me the letters," which I handed to him; and as he began to read Illinois, Wisconsin, Minnesota, Texas, Missouri, and New Sweden, Maine, he looked at me with a strange expression in his eyes, and I began to fear I did not please him, so I asked him what the matter was, and he said he thought I might be tired after my long journey, and if I would pay him three cents apiece for the letters, he would see to it that they would reach their owners. I thought he was remarkably kind to offer to run round for me at that price, and it was not until some time afterwards that I found out that he engaged Uncle Sam to deliver my letters, and that the directions thereon were States situated thousands of miles apart, instead of being suburbs of Boston.

The Indians are ever an interesting subject for the Swedes at home to enquire about, for they seem to have an idea that Boston has about as many Indians as white people among its population, and I was asked this summer if I had had much trouble with the Indians, and if I was not afraid of being scalped, and all such matters, to which I replied that as far as my observation had been among the Boston Indians, I had found them very orderly and peaceable, and that, in fact, the most of them were very well-behaved, being mostly employed as sentinels outside cigar and tobacco shops.

A bald-headed person coming from the United States to Sweden excites a great deal of curiosity among the common people in that country, for it is hard to convince them that he has not left his scalp suspended, as an ornamental appendage, to the belt of one of the noble red Indians of the Boston prairies.

RECORDS OF THE CITIES AND TOWNS OF ESSEX COUNTY.  
INFORMATION ON THEIR CONDITION REQUESTED.

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At a regular meeting of the Institute held on Monday evening, February 5, 1883, Vice President Robert S. Rantoul stated that he had corresponded with John T. Hassam, Esq., of Boston, who is interested in a plan for a thorough examination of the town and city records in this Commonwealth, to ascertain their present condition, also looking to their preservation and to the adoption of the most approved methods of arrangement.

The increasing interest, during the past few years, in genealogical and historical investigations, has imparted to these records a due appreciation of their value as depositories of historical information and the great need of the fostering care of the legislature and of those in authority.

Mr. Rantoul showed some blank forms of a circular which had been prepared for the use of the town and city clerks, so that a uniformity in the returns may be observed; also a circular-letter to be signed by the President, soliciting a response to the questions proposed.

Mr. Hassam has requested the coöperation of the Institute, and is desirous that it would take charge of the sending of the circulars and the receiving of the returns from the clerks of the cities and towns of Essex county, mentioning that other societies in the state had been invited to coöperate and to assume their respective proportion of the work required.

The subject was referred to a committee consisting of Messrs. Robert S. Rantoul, Henry F. Waters, and James A. Emmerton with authority to act.





IN MEMORY OF  
CALEB COOKE.

Born February 5, 1836.

Died June 5, 1880.

— — —  
ASSISTANT AND CURATOR  
IN THE MUSEUM OF THE  
PEABODY ACADEMY OF SCIENCE.

1867 — 1880.



PRESENTATION OF THE CALEB COOKE MEMORIAL TABLET  
TO THE TRUSTEES OF THE PEABODY ACADEMY  
OF SCIENCE, JAN. 12, 1883.

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THE subscribers to the Caleb Cooke Memorial Tablet met in the lecture room of the Academy on Friday evening Jan. 12, 1883, for the purpose of transferring to the trustees of the Academy the mural tablet which had been placed in the hallway a few days before.

Mr. John Robinson presided at the meeting and introduced the subject as follows: During the spring of 1882, a few friends of the late Caleb Cooke, feeling that his untiring interest and long continued services in behalf of the scientific institutions of Salem should in some way be recognized, and that a simple record of his work should be placed before the eyes of the public, suggested the advisability, by a general subscription, of raising a sum of money sufficient to purchase and place in the museum, where so much of Mr. Cooke's life had been spent, a fitting mural tablet to his memory.

The suggestion met with the cordial approval of all and, without solicitation other than a short notice in the Salem newspapers, nearly the required sum was raised in fifty cent subscriptions. This was augmented by the proceeds of an entertainment and a few larger subscriptions from intimate friends.

The trustees of the Academy gladly approved of the project, and at once a committee of the subscribers arranged with the Boston Terra Cotta Company for a suit-

able tablet and border from original and appropriate designs. This upon being moulded proved even more satisfactory than was expected, and was soon completed and placed in the position selected at the Museum, the work of setting the tablet being gratuitously performed by Mr. Joseph N. Peterson, the Academy's mason.

It would not be the wish of our late friend that we should come here in a spirit of sadness, but rather that we should meet socially and pleasantly as he himself was always wont to do. It is fitting too that, in this hall where, yearly, thousands of visitors pass to and fro, a simple memorial should meet their eyes and continually remind them of one who contributed so much towards the collection of the specimens and the arrangement of the Museum.

Mr. Robert S. Rantoul, in behalf of the subscribers, presented the tablet to the trustees in the following words :

The friends of the late Caleb Cooke, and it was my pleasure to be counted among them, have commissioned me to tender, in their name and behalf, to the trustees of the Peabody Academy of Science, the mural tablet which they have placed here, to be a memorial as lasting as it is unique and beautiful, of our lamented friend, an officer of this school of science.

It is well that here, in the very scene of his labors, the generations who are to enjoy the fruits of them should pause before this simple slab. It matters little now that he whose name it bears was the pupil and coadjutor of Agassiz,—that he had been a voyager in both continents of the Southern Hemisphere,—that he lived here or there died. But it matters much for all time to know that here was one who could forego the keener gratifications of the hour for the sake of lasting good. Here

was one who was happier to toil modestly and inconspicuously at the far-off solution of those endless problems of the material world, so the result obtained might be ever so little a modicum of truth, rather than to struggle after the unsubstantial prizes of reputation and of life, so apt to crumble in the hands that snatch them. Here was a man who found content in friendships,—his highest pleasure in human sympathy and modest work. Other men understood and professed that usefulness is happiness and that there is no higher good than doing for others what good we can. Here was a man who felt and acted it. And if it be true indeed, that getting and giving are the be all and end all of American life, then it is well that this elegant memorial shall attest the fact that here, amongst us, in this bustling nineteenth century of ours, there lived and died a quiet worker, little known and caring little to be known beyond his sphere, wise enough to know that no getting more enriches than the getting, out of her secret storehouses, of Nature's jewels of knowledge,—that no giving more truly warms the heart of giver and taker, and is twice blest, than the giving of knowledge.

We need not here recount the simple phases of this life too early spent. They are a familiar portion of our household history. To the labyrinthian mazes of this noble museum his mind was the clew. It was said, somewhat extravagantly, that he could put his hand, in the dark, on every specimen, but of how many of those specimens was it the fact that his hand had placed them where they were. I say nothing of his philanthropy, of his broad catholicity of spirit, of a score of estimable personal traits, each as conspicuous as his unswerving love of science. Other occasions have been found to speak of them, and others will speak of them

here ; my function is less broad. For those of the passing generation who knew our friend there is no need of word or tablet to keep his memory fresh. The laurel, perennial green, the shells reversed, the bird of wisdom, seeing through the darkness, these are fitting emblems, were emblems needed, of the memory of our loss. But for that greater multitude which follows on, to which his life will be a myth and his life-work will be only merged in the mighty aggregate of modern scientific thought, let this slab remain, while this noble monument, the Peabody Academy, shall stand, to attest that only those who serve are worthy, and that by the side of wealth which grandly endows science, is to be commemorated with equal gratitude that life-consecration which makes science and its grand endowment possible.

At the close of Mr. Rantoul's address, Dr. Henry Wheatland, Vice President of the Peabody Academy of Science, accepting the memorial, responded in behalf of the trustees, as follows :

It is much to be regretted that on this occasion our honored President is not here to respond in fitting terms to your appropriate remarks at the unveiling of this memorial given by many friends, in recognition of the relations of Mr. Cooke to this institution.

The President has been for several months in Europe and will probably remain until the spring or early summer when I hope that he will return with greatly improved health, which had been much impaired by arduous and exhaustive labors on the bench of the Supreme Court.

Some thirty years ago, a tall, red-haired youth, not out of his teens, came to the rooms of the Essex Institute and desired to be a member. He was elected May 11, 1853, and continued his membership from that time

until his decease, taking a deep interest in its objects and in the natural sciences, and for more than twenty-one years of this period held some official position, or a place on some important committee.

Caleb Cooke was the son of William and Mary (Fogg) Cooke, and was born in Salem Feb. 5, 1836. His father was a mariner and for several years was an officer on board of vessels engaged in the West African trade and died in California when the son was in his boyhood. He was educated in our public schools, and commenced active life as a clerk in the bookstore of Henry Whipple & Son, continuing in this position only for a short time when he left. After spending about one year with George F. Read in the study of the languages, especially the Latin, he devoted himself principally to the pursuit of natural history, which had long been his inclination.

To this end he went to Cambridge and pursued his studies under Prof. L. Agassiz, *the great teacher*, who during his residence in this country had done so much to stimulate the study of nature and a spirit of scientific investigation, commenced the formation of the Museum of Comparative Zoology, and gathered a class of pupils, many of whom have contributed much to advance his plans and have become distinguished. They hold or have held many prominent positions, professorships in our various seats of learning, the charge of museums, conducting scientific explorations, or preparing communications to the publications of learned societies or the journals of the day, or separate treatises on their respective specialties. Such were his associates during his connection with Agassiz.

In 1859, at the request of Professor Agassiz, he went to Para, Brazil, to collect specimens for the Museum, and in 1860 he went to Zanzibar on a like mission, sailing from Salem in the bark *Persia* on the fifth of November of

that year. He remained in this field of labor until he was compelled to leave on account of sickness, having the African fever, but almost recovered his health during his passage home, arriving at Providence per English bark Sheffield, May 17, 1865, after an eighty-two days' passage from Zanzibar.

While he was absent, Professor Agassiz and Senator Sumner procured for him the appointment of United States Consul at Mozambique, but the commission passed him in transit and he never acted under it, although his name was borne upon the rolls for several years.

From the organization of the Peabody Academy of Science in March, 1867, until his decease, he was an Assistant and one of the Curators of the Museum under its charge.

He was a member of the American Association for the Advancement of Science, and of the Boston Society of Natural History.

In 1875, he assisted Dr. G. M. Levette of the State Geological Survey of Indiana, in a hydrographic survey of a dozen or more of the lakes in the northern part of that state, where his experience in the collecting and preservation of specimens of natural history and in seining and dredging was of great value.

About a year after its organization in 1869, the Salem Fraternity first attracted Mr. Cooke's attention. He soon became one of its most helpful friends, and more and more he took into his willing hands multiplying activities. He was interested in the formation of the library and reading room, becoming chairman of the committee on these departments and constantly and earnestly devoting himself to the welfare of this institution. He possessed admirable traits of character. No one could take more pains

to confer a favor than he even to the humblest of the boys. He was a useful man in the line of his specialties.

Resolutely following up his work to the last, refusing to listen to the suggestions of rest or medical advice till it was too late, he sank rapidly to his death, which occurred on the fifth of June, 1880.

In behalf of the trustees, I accept this noble tribute to his memory, and tender to you, the representative of the contributors and of those who took the charge of this work, their sincere thanks. It will always have a suitable place on the walls of their building.

May it be an incentive to others to take up his mantle and go and do likewise in the advancement of all in education, knowledge and general culture.

Rev. E. B. Willson being called upon by the presiding officer as connected with the Salem Fraternity, of which Mr. Cooke had been an active member, said :

Mr. Cooke's long-continued and valuable work as a sincerely devoted manager and helper, in carrying on the several departments of the Salem Fraternity, was always a gratuitous service, given cheerfully and without solicitation. He was the one who came when others staid away : day or evening. He had great influence with the boys and young men. He knew how to control with vigor, yet with kindness and justice, the sometimes rather turbulent crowd which resorts to the amusement room of the Fraternity of a winter's evening. He hated cant and all the affectations of a busy and pretentious benevolence ; would not hear praise or commendation of himself ; believed in showing whether or not he was a friend of his kind by what he did, and not by speech.

The Fraternity lost its right hand when he died. Its counselling intelligence lost, too, in him some of its best practical wisdom : that wisdom that comes primarily from a hearty interest. In him was an unwearying willingness to plan and to work for the objects which this association seeks to accomplish. He believed in it wholly. He saw in its methods the best, perhaps the only, way to deal with a class of persons especially exposed, especially unprovided for in the general social and educational arrangements of the day, and equally endangering society in the future, if unconsidered now.

If any should be kept in remembrance, and should have commemorating tablets set up as memorials of their rare qualities and services it is such as he.

The Chair referred to Mr. Cooke's love for nature and the enjoyment he always took in collecting the earliest flowers at spring, and called upon Mr. W. P. Andrews as one of the friends who had frequently accompanied him at such times.

In response, Mr. Andrews said :

He had but one word to add to the just and discriminating estimates of Mr. Cooke ; and that was as to his non-observance of religious forms and ceremonies, and the fact that he was never to be found inside a church on Sunday morning. This arose not from depreciation of the value of any sincere religious conviction ; for Mr. Cooke's life was sincerity itself, and he was quick to recognize any good in the world ; but rather from his deep feeling for our common mother Nature, who spoke to him in tones which made the efforts of the average preacher and congregation seem tame and cold in comparison.



To one who is always conscious of the lofty harmonies of the universe, the confinement of a meeting house, and the somewhat labored requirements of stated devotion, are often less a help than a hinderance to real adoration. Above all things Mr. Cooke was real and true to a remarkable degree; and if he was careless of the outward formulas of worship, the best and most genuine of his clerical friends have borne manly testimony to the fact, that his whole life was an act of devotion. "While we preached the Christ and him crucified, he lived the Christ life," said one of the five ministers of the Gospel who attended the funeral of this unobtrusive, humble worker; and the statement sums up Mr. Cooke's being, which was indeed a perpetual prayer; unuttered by the lips,—for he made no outward professions of any sort,—but *acted* in his unconscious daily existence. Could he help the needy in mind, body or estate, there was his service. Could he assist a friend in any work or pleasure, there was his hymn of praise. And nothing could daunt him unless it was the expectation of some acknowledgment of gratitude, from which he shrank as hastily as most men seek reward here or hereafter for the good they have done.

His life was undoubtedly shortened by his untiring devotion to the charity with which his name will be forever associated; and almost his last strength was spent in giving pleasure to a friend's children, whose sunny natures always found an answer in his own unselfish child-heart. The lovely arethusa, which they had gaily plucked together on the last Sunday morning he was with us, bloomed on unwithered, when his own outward form was returned to the Great Mother whose gentle spirit blossoms anew in the sweetness and purity of his own.

Careless of forms, and all our casual creeds,  
Known truly but to nearest friends, and few;  
He simply asked: "What is there I can do  
For others?" heedless of his own scant needs.

He led the Life that every pulpit feeds,  
Though ne'er the pastors found him in a pew:  
Yet one said: "Brother, many years we two  
Have preached The Christ;—he made our *words* his deeds."

Pure Soul! not for himself he spent his might,  
And humbly learned his Mother Nature's lore,  
Roaming a child, with children, by her side.

Leal-hearted Comrade! not for him came night;  
Rather for us who took the flowers he bore,  
The flowers still fair, though he, good man, has died.

The Chair then read several letters which had been received from persons at a distance, and those nearer home who were prevented from being present on the occasion and which are referred to below:

CAMBRIDGE, MASS., Jan. 12, 1883.

Were it not that I have been confined to the house for several days by a severe cold, I should be with you this evening to join in the well deserved tribute to the memory of Caleb Cooke, my friend and associate for so many years.

He was a faithful worker and officer in the Institute and Academy, and to his quiet and unostentatious labors far more is due in developing the wide-spread interest in local natural history pursuits, for which Essex County has become noted, than his peculiar character and habits would lead the superficial observer to suspect. His singular life, with its many deep undercurrents of thought and action, was only understood during his lifetime by a few who had long been associated with him, although his good works have been acknowledged since his death. I am personally thankful that the memory of my friend is to be perpetuated by the tablet to be presented to the Academy this evening, and it seems to me that the Board of Trustees

will never be called upon to accept a more honorable trust than its perpetual care.

Regretting that I cannot be present at the ceremony of presentation,

I remain,

Yours very truly,

F. W. PUTNAM.

PROVIDENCE, R. I., Jan. 17, 1883.

I received your postal card in reference to the dedication of the memorial to Caleb Cooke, and being much occupied with sickness in my family did not answer it at once, supposing that the exercises would not take place immediately. I regret exceedingly that I did not send a letter at once to be read on the occasion with the others. I had a peculiar regard and affection for our departed friend. His unselfish devotion to his friends, his zeal for science and the very many unostentatious services he rendered to those working upon scientific subjects, as well as the hearty and wholesome manner in which he labored for the Essex Institute and Peabody Academy of Science, as well as the Salem Fraternity, are deserving of the permanent record which has been made.

Yours very truly,

A. S. PACKARD, jr.

It is with regret that I am unable to accept your kind invitation to attend the presentation of the Caleb Cooke Memorial to the Trustees. I venture to send a word of tribute which you may hide away with your account of the evening's exercises; it is simply the word of a witness who knew him not only in the work of the Summer School and the Essex Institute, but through his generous regard for children.

Kind hands erect this Tablet  
 To the memory of one,  
 Whose hand was ever ready  
 To assist his fellows,  
 Whose heart was kind and tender  
 As a child's; as loyal and true  
 As any knight of old;  
 Simple and unpretentious,  
 Yet great, because *himself*;  
 Honest, upright, sincere,  
 Such was the man we honor,  
 He lived and labored *here*.

Yours cordially,

KATE TANNATT WOODS.

SALEM, Jan. 12, 1883.

GRAND RAPIDS, Jan. 14, 1883.

I wish to express my thanks that I am still remembered in Salem, and especially that I am identified as a friend of the late Caleb Cooke.

I know nothing of the circumstances connected with his death — simply that he is gone, and I feel the deepest sorrow that this must be.

Mr. Cooke was the first person, belonging to the Peabody Academy of Science, who welcomed me when I reported myself as a student for the summer class of 1876, and his cordial, earnest greeting gave me a feeling, at once, that he was to be among those who would take an interest in my welfare. Mr. Cooke had many opportunities that season to extend friendly services, and special acts of kindness, for which I shall always feel grateful.

I am glad this "Memorial Tablet" has been placed in the building, which must have been dear to him from long association.

These few lines are prompted by a warm regard, and deep feeling of respect for the one whose memory you have so appropriately honored.

Yours very truly,  
MRS. GEO. C. FITCH.

After several other letters together with the above had been read, the company passed to the hall to examine the tablet which had been unveiled.

At the close of the exercises a collation was served in the library, after which the party adjourned.

NOTE.—The accompanying heliotype illustration of the memorial tablet is from a photograph made by Mr. Andrew B. Cross of Salem, under a Thomson-Houston Electric light of 2,000 candle power, kindly loaned for the purpose by the Salem Electric Lighting Company.

## SELISH MYTHS.

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By W. J. HOFFMAN, M. D.

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### INTRODUCTION.

THE accompanying stories were obtained from the Flat-head, or, more properly speaking, Selish Indians, consisting of one of the tribes composing the eastern division of the Selish linguistic stock, and who occupy the Jocko Valley, in Montana, at the eastern base of the Rocky Mountains. The Selish, as well as all other native tribes, are extremely fond of passing the long winter evenings in story-telling, and to attempt to record the events of one evening would be an arduous task. A few myths have been selected for this paper, and for the purpose of illustrating the language, as well as the syntactical structure, but a single narrative is submitted in the original text. It is proper to state that these Indians, when speaking of the various animals and birds and their participation in various transactions and exploits, do not look upon them in any other light than that of human beings who lived in remote times. One reason why we hear such expressions as "A Panther married a Salmon," or "The Bear killed the Gopher," is because an individual named "The Panther" married the daughter of another called the "Salmon;" though generally, these names are not personal names but relate to the gens or clans of which the respective persons were members. According to tribal laws, no one is permitted to marry within the gens, but always selects a partner from without, the gens being considered consanguineous and descendants from a common ancestor.

In the following text I have adopted phonetic orthography, adding two characters to express sounds not readily reproduced in English, viz. :

*χ*, the sound of the German *ch* in *nacht*, the Arabic *ghain* or Spanish *mujer*; *q*, being equal to *ch* in German *nicht*. This is a softer sound than the preceding which is coarse and guttural.

Sēn'-tshē-lē'		kō'-tump't.	
[of the] Coyote		Story.	
Sē-huist'-tsēn'tshē-lēp		[and]	ō-wē'-tshēs
He was walking, the Coyote			he saw
skō-lē'-pī*	tō-ō'-sē,	[and]	hui'-huē-iu' ;
they were cooking	eggs,		many animals and birds ;
s'ā-a-tsu'qts	wē-titsht'	[and]	es-tsi-ā'
he looked	while they went to sleep		all of them
u-qōl'-lū sēn' -tshē'-lē'	[and]	t'l'-kēn-tēs'	[from the eggs].
he went the Coyote		removed the dirt	
t'lūs-kāl-ēp'.	U-il'-qīs	tsūs'-pēn-ōs ;	everything ;
from the cooking place.	Then he ate		
o-ko-ēs'	l'huī'-hue-u-ql's	[and]	ē-huē'-u-ql'sts
[then] he took	the little bird†		he pulled
		[crosswise	
χ'lus'-pē-lēm'-tsīs ;	o'k-tsō'-tsīs	[of]	χlūs'-ēn'k-tsū' ;
the bill ;	he pressed		the Lynx ;‡
sō'-tūmst	sō'-pōt	[of]	χlōs'-qtī-sū'-mī-ē ;
he pulled	the tail		the Panther ;¶
[stretched]			
o-wē'wī'	kwa'-wī-lizlts'	χlōs'-tshi-tshi-ma'-uqts ;	the breast he made ;
the Meadow	yellow breast		
[Lark			

ō-huīst'-zlu'		sēn'-tshě-lē'		tshil-kūt'
he walked away		the Coyote		a short distance
χlāk'-tshīlsht				wě-χ'l-stla'-χlsht.
he sat down		[and]		he looked at them.
Kā-liqts'				χlu-hui'-huē-χults.
They awoke				all the birds and animals.
Sē'-tsīsh-tshēl',				ha'-χlē
What is the matter,				already
klě'-kě-o'-vi-tsě				ū'-kě-tītsh'?
we ate all				before we went to sleep?
Wē'-kōl-kwě'-tshi-nā',				ta'-sīn-sō-hui'-nē-mīn-tēm'.
Talked one,				they could not understand him.
Kwēmt'-po-mīn-tsūqt.				
Then they all scattered.				

## THE COYOTE AND THE MUD-HEN.

THE Coyote was one time compelled to hunt for food, and while strolling along the shore of a lake, observed a great variety of water fowl only a short distance from land, but still too much exposed to be approached without detection. He found some broad leaves growing in the water, took a quantity of them with which he covered his body, and crawled slowly along the edge of the water to the point opposite, and nearest to, the birds. The Swan caught sight of the Coyote as he was approaching and called out to him, saying, "Coyote, what are you doing with that load on your back?" to which the Coyote replied, "That is my music." "That is queer looking music," said the Swan, "let us hear your song, so that we may learn to know your voice." "I cannot do it now," the Coyote replied, "but if you will come to my lodge this evening, which I shall build here on the bank, I will sing for you and we can have a dance." The birds agreed to come, and

the Coyote immediately left and began to erect his lodge, securing all the coverings and closing all the small openings so as to prevent the escape of any one within, except through the doorway.

After sunset the birds began to arrive, entered the lodge and took their places around the fire. When all had come, and the lodge was full, the Coyote said "Now we will have to put out the fire so that none of us get burnt by treading on the hot coals." The fire was then extinguished, when the Coyote took his place at the door, telling the birds to dance around in a circle while he sang for them. The Coyote sang, and the birds danced, passing around and by the door where the Coyote was stationed where he grasped the birds, rapidly as possible, by the necks which he broke, throwing the bodies on the outside. After a while one of the Ducks said, "Where are all our dancers, I hear but a few? light the fire so that we may see what is going on." Then the Coyote built another fire that he might catch the other birds, but when they saw their companions lying dead on the outside of the lodge, they cried out that they were being exterminated, and made a rush for the door, the last one to leave being the Mud-Hen, and as it stooped to pass through the door, the Coyote kicked it on the legs so that the joints protrude awkwardly toward the tail even to this day.

The Ponkashave a myth somewhat resembling the above, but which has reference to a change of the color of the eyes of the Turkey, which corresponds to the Dakota myth relating to a similar change in the color of the eyes of the Wood Duck.

#### HOW THE LYNX GOT HIS BROAD FACE.

THERE was a great chief, the Panther, who had a beautiful daughter. One day there was a gathering of the whole tribe when each animal tried to obtain her for his



wife. The Bear proposed to the Panther for his daughter, but he would not listen. The Rabbit also tried, but in vain, as did all the others. When night came on, the Lynx sat thinking, when all at once the thought came to him that he might behold the Panther's daughter, even if he could not marry her, whereupon he left his own lodge and proceeded to that occupied by her. Then he carefully crawled upon the lodge and looked down through the opening left for the smoke to issue, where he saw the Panther girl asleep, with her mouth wide open. The Lynx sat in wonder looking at the beautiful girl, and while he was panting from the exertions in ascending the lodge, some saliva dropped down into her mouth, which caused her to have a child, in due time, which could not be stopped from crying.

The Panther Chief tried to quiet his grandchild, but could not; the daughter tried, but failed, as did all the rest of the Panther's family. No one could be found who could be chosen as the father of the crying child. Then the Panther Chief called together all the young men of the tribe, and said, "Go you, all of you, and try if you can quiet my Grandchild, and the one in whose embrace it ceases to cry, shall be the father of my Grandchild and the husband of my daughter." Then the Bear tried to quiet the child but could not; the Rabbit tried and failed; and all the rest of the young men met with no success. The Coyote came last, and when he took up the child it became quiet at once, when the Panther Chief said, "Coyote, the child is yours, and you must take my daughter for your wife." This was as the Coyote desired, but when he attempted to take his wife away, all the young men, who had been repulsed in their previous attentions to the Panther girl, set upon the Lynx and beat him to death and scattered the pieces.

Then the tribe moved off to a distant camping place, leaving the Panther girl with her child and murdered husband to themselves. Then from the pieces of the Lynx lying about, came a voice directing her to place them together as well as she could and to set the mass in a corner of the lodge, and to cover it with soft robes where it should remain for five days. The wife did as she was told, and sat despondently in the lodge waiting for the time to elapse when she could again have her husband restored to her. On the third day, the wife, who had become very lonely, approached her husband and asked, "May I remove the robes to look at you?" "No," responded the Lynx, "wait two days longer and I will be well." Then she pressed the robes closely about him and pressed them upon his head to keep him warm. On the fourth day, the wife again approached the corner in which her husband was, and said, "May I remove the blankets and take you out, I am very lonesome?" "No," responded the Lynx, "wait one day longer and then I shall be quite well." On the morning of the fifth day, the Panther again approached the Lynx and said, "May I remove the blankets and take you out, I am so lonesome that I can wait no longer?" but before the Lynx could reply that the day was not yet over, she had removed the coverings to liberate her husband, when he immediately came forth, but his face was still broad and flat from the pressure of the blankets put upon it, and so it remains to this day.

In the meantime the tribe, who had removed from the old camping ground, had suffered much from want and privation. Many had starved to death, and many more were dying. The Magpie happened to return to the old camp one day, and found that the Lynx and his family had all the meat they could eat; in fact they had so much that everything was greasy with the fat that had been thrown

from the lodge. Then the Magpie gathered up a great quantity of meat, returned to his camp and fed the tribe. The Panther Chief then said, "Where did you find meat, we have none in our country?" "I went hunting," answered the Magpie, "and killed some game." The other hunters now demanded the truth, as they did not believe the Magpie's story.

Then the Magpie narrated his journey to the old camping ground, saying "the Lynx and his family have all they can eat. They have all the meat they can want, and more too, in fact they have so much that everything in their camp looks greasy." "Then we shall return to them," said the Panther, "get you everything together that we can take with us and let us leave at once." After all were ready to leave, the Panther said, "come, let us start for our old home," and they set out. After a long journey, the tribe came in sight of the lodge owned by the Lynx, and soon every one was glad, for the Lynx and his wife came out of the lodge and welcomed them back.

#### HOW THE RABBIT HAD HIS LIP CUT.

One day the Rabbit happened to visit a neighboring camp, where he saw a beautiful girl with whom he immediately fell in love. He at once started to catch her, but she ran very fast, and the faster the Rabbit ran in pursuit the faster went the girl. The young men of the tribe, seeing a stranger chasing their favorite, immediately gave chase, and when they got near enough, began to throw stones and clubs at the Rabbit, until finally one young warrior hurled a club which hit the Rabbit below the nose slitting the upper lip, which has not healed to this day.

#### THE COYOTE AND THE FISHES.

The Coyote one day stood upon the bank of a large river in which he saw many white fish swimming about. Then he said to them, "Go, tell your people to come to

my lodge which I shall build here on the bank, and to play with me. I shall look for you to-morrow." The fish said they would go, and immediately disappeared in deep water. The Coyote was a great gambler, but did not suppose the fish would be able to come on land, still, he built a lodge as he had told them he would do. Next day great numbers of all kinds of fishes came swarming from the river and entered the Coyote's lodge. Then they began to play, and played until the Coyote had lost everything he owned, even his clothing.

When the Fishes were ready to go, one of them said, "Coyote, come and see us under the water to-morrow, and we will play again." The Coyote said that he would come, though he knew he could not go under the water, neither did the Fishes believe that he would come. Then the Coyote went away very sad, when the Fox, his cousin, met him and said, "Brother, why are you so sad?" "I am sad," replied the Coyote, "because I lost everything I owned yesterday while playing with the Fishes. I cannot recover the things, although they invited me to come and play with them to-day." Then the Fox said, "if that is all, I will take you under the water, and we can go now;" so the Fox took his pipe, put the Coyote into the bowl and covered it with clay. Then the Fox got into a canoe and paddled out into deep water, when he jumped overboard and sank to the bottom, where he took the Coyote out of his pipe, and they started to visit the camp of the Fishes, which they soon found.

The Coyote then began to play with the Fishes, and continued gambling until he had recovered all he had lost the day before, and had won everything from the Fishes that could be carried away. Then the Fox again put the Coyote into the bowl of his pipe, ascended to his canoe, and returned to the shore where he liberated his cousin, the Coyote.

## THE COYOTE AND HIS NEIGHBORS.

The Coyote had five sons with his wife, and lived in a lodge a great distance from any other habitation. One morning he took his youngest son and started to visit the Elk, who also had five sons. When, after a long journey, they arrived at the Elk's lodge, they found it empty and no signs of anything to eat. Then the Coyote said to his son, "I do not like this, not having anything to eat after such a long walk." Soon the Elk returned and after welcoming his visitors, stooped and picked up a sharp stick with which he began to tear open his hips to dig out some Kamass roots. The Elk then said "Eat some Kamass roots, they are very good; I always provide myself in this way when I am away from home and get hungry." "What," said the Coyote, "do you expect me to eat dung?" "That is not dung," said the Elk, "but Kamass roots." Then the Coyote picked up one of them, and after nibbling at it cautiously, discovered it to be very good, whereupon he and his son filled their bellies with Kamass.

When the Coyote was about to depart, he said to the Elk, "Come and see me to-morrow, and see how I live." "Yes," responded the Elk, "I will come to see you to-morrow."

Next morning the Elk took his youngest son and set out for the Coyote's lodge which he reached after a long journey. After the Elk was welcomed, the Coyote took a sharpened stick, as he had seen the Elk do, and commenced to tear his flesh in a painful manner, when the Elk cried, "Stop! stop! do not tear yourself so; I do not think you ever tried that before. It is *my* practice always to do that when I am away from home and get hungry, so let me provide the Kamass roots this time." "That is just what I wanted you to do for me," said the Coyote, and handing the stick to the Elk, they soon had enough Kamass for all,

and after they had filled their bellies, the Elk and his son left for home.

Next day the Coyote said to his youngest son, "Let us call on our neighbor, the Bear, and see how he lives." So after telling his wife of his plan, the Coyote and his son started, and after a long journey, reached the Bear's lodge. Then the Bear welcomed his visitors, when the Coyote said "I do not see anything to eat, and we are hungry after our long walk." The Bear then got down a large knife, and after sharpening the edge against another stone,<sup>1</sup> walked up to his wife and, grasping her by the hip, cut out some large slices of meat, which was soon broiled on the coals and served. The Bear then took up a handful of earth which he rubbed over the wound on his wife's hip, when it instantly healed and was covered with hair as before. Then the Bear said, "This is the way I always provide myself with meat when I am away from home and get hungry." After they had all filled their bellies with Bear's meat, the Coyote rose to go, and said, "Bear, come and see me to-morrow, and see how I live." "Yes," responded the Bear, "I will come and see you to-morrow."

Next morning, the Bear with the youngest of his five sons, called at the Coyote's lodge and was welcomed. After a short time the Coyote arose and got a knife, which he sharpened on another stone, as he had seen the Bear do; went up to his wife, grasped her by the hip, and cut her almost to pieces during which she screamed with pain. Then the Bear cried, "Stop! stop! why are you doing that? I do not think you ever tried that before. It is *my* practice always to do that when I am away from home and get hungry, but you have never tried it before." Then the Bear took the knife and cut a large quantity of meat from

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<sup>1</sup> It is evident from the use of this term that stone knives were used at the time to which the myth relates.

his own hip, after which he took up a small handful of earth, rubbed it upon the wound, which healed instantly and was covered with hair as before. "That is just what I wanted you to do," said the Coyote. After the piece of meat had been broiled on the coals, they all ate until their bellies were full, when the Bear arose and started for home.

On the next day, the Coyote took his youngest son, and started to visit the Kingfisher, who lived at a very great distance. They were both very tired and hungry by the time they reached the Kingfisher's lodge, but, when they had been welcomed, they were pleased to see preparations for something to eat. The Coyote was astonished to see how the Kingfisher and his family all had their hair arranged in top-knots, but said nothing. The Kingfisher told his youngest son to collect some willow poles and to erect a platform on the top of the lodge, which he immediately proceeded to do.

Then the Kingfisher flew to the top of the lodge, which was located near the river, and after watching a small opening in the ice for a short time, suddenly flew toward and into the hole, disappearing under the water. Soon he returned bringing a fine large fish in his mouth, which was broiled on the coals and served. After they had all filled their bellies with fish, the Coyote arose to go and said, "Kingfisher, come and see me to-morrow, and see how I live." "Yes," responded the Kingfisher, "I will come and see you to-morrow."

Next morning, the Kingfisher and his youngest son started to visit the Coyote, whose lodge they reached after a very long journey. The Coyote had been very much occupied all the morning in tying his children's hair into little tufts on the tops of their heads; when his wife said, "What are you doing with the children's heads?" "Oh,"

replied the Coyote, "I am only doing honor to the Kingfisher who is coming to see us to-day."

The Kingfisher was welcomed, and the Coyote, thinking it time to have something to eat, called to his youngest son and said, "Go and gather some willow poles and erect a platform on the top of the lodge," which he immediately proceeded to do. When it was finished the Coyote ascended the lodge, crawled on top of the platform, and jumped off into the river, but the water being covered with ice, he almost crushed his head and lay some time badly hurt. The Kingfisher, though too late, cried, "Stop! stop! why are you doing that? I do not think you ever tried that before. It is *my* practice always to do that when I am away from home and get hungry, but you have never tried it before." Then the Kingfisher broke a hole in the ice, ascended the platform and so dived into the river, soon returning with a fine large fish, which was soon broiled on the coals and served. Then they all ate until their bellies were full, when the Kingfisher and his son returned to their home.

After this, the Coyote continued to hunt his food as he had been taught by his forefathers.

#### THE SALMON AND THE WOLF.

The Panther's youngest daughter was a very beautiful girl, whom all the young men of the tribe desired to marry, but whose offers the Panther refused, one by one. To avoid the necessity of constantly refusing these applicants, the Panther said, "Any one who will break my Elk-horns shall have my daughter." This news soon spread to neighboring camps, and a day was set for the trial of breaking the "magic" Elk-horns. The Bear came forward, grasped the horns and crushed them into small pieces, but when



he threw them upon the ground they immediately flew together and the horns were entire, as before. Then the Rabbit took the horns and crushed them, but he had no sooner thrown them upon the ground than the pieces had again united. Then the Lynx tried, and the Coyote, and all the rest of the young men present.

The Salmon had heard of the beautiful daughter of the Panther, and decided to try to obtain her, so he brought with him two friends, the Kingfisher and the Blackbird.<sup>2</sup> The Salmon lived upon a large river at a great distance from the Panther's village, and he did not reach that place until all the young warriors had failed in their trials for the Panther's daughter.

The wolf,<sup>3</sup> who lived far to the south, had two elder brothers, and these three also started for the Panther's village, arriving there at the same time as the Salmon and his friends. Then the Wolf said, "Salmon, you came first, you break the horns if you can," but the Salmon refused, saying, "No, Wolf, you came before I did, you break the horns if you can." Then the oldest Wolf tried, broke the horns, but they immediately became whole again when thrown upon the ground. Then the next wolf tried, but with no better luck. The Wolf whose trial now came was a Shaman,<sup>4</sup> and felt sure of winning the girl, so he picked up the horns, broke them into small pieces, but when he threw them upon the ground they slowly united as before. Then the Salmon came forward, took the horns, broke them into small pieces and threw them upon the ground where they remained and did not unite again. Then

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<sup>2</sup> This Blackbird is said to have peculiar eyes and habits, and evidently signifies the *Pipilo megalonyx*.

<sup>3</sup> *Canis occidentalis*, commonly known as the Grey Wolf.

<sup>4</sup> Improperly termed "Medicine Man."

the Panther said, "Salmon, you broke the horns, you take my daughter for your wife." Then the Salmon took the Panther girl under his arm and with his companions, started for home. They had not gone far, before the Wolf and his elder brothers followed the Salmon and began to fight. They fought two days and two nights, during which time the Salmon and his friends gradually worked their way toward the river. On the third morning, just as the Salmon reached the bank of the river, the Rattlesnake, who lived on the opposite shore and who was a cousin to the Wolf, came out of his lodge, and seeing his cousin the Wolf fighting, took an arrow and shot it at the Salmon striking him in the side of the neck. The Salmon fell down near the water's edge, while his friends were compelled to leave because the Wolf and his elder brothers came and took away the Salmon's wife and went home.

The fishes came and threw water on the Salmon, which kept him alive, and after a while he worked his way into the water and swam down to the Fish Hawk's camp. The Fish Hawk welcomed the Salmon and healed his wound, though he remained there a whole year.

When the summer came again, the Salmon said to the Fish Hawk, "Fish Hawk, when you fly away from home, do you ever see anything of my enemy, the Wolf?" "Yes," said the Fish Hawk, "I see him sometimes; he is a great hunter and kills many deer." Then the Salmon took the arrow with which he had been wounded, and set out to visit the Rattlesnake, who lived in a grass lodge. When the Salmon came near the lodge he listened and heard the Rattlesnake singing, telling how he killed a great Shaman, the Salmon, and gave the Wolf the victory. Then the Salmon went nearer to the lodge, coughed so as to attract the Rattlesnake's attention, when the Rattlesnake peeped

out to see who was coming. When he saw the Salmon he was much surprised, but came out and pretended to welcome him, saying, "Why, Salmon, I thought you had been killed last year, and I have been singing your death-song, and telling my friends how sad I was." Then the Salmon laid down the arrow with which the Rattlesnake had hit him, saying, "Rattlesnake, is this your arrow?" "Yes," said the Rattlesnake, "where did you find it?" "I found it down on the shore." "Oh!" replied the Rattlesnake, "I lost that yesterday while shooting ducks, I knew that it must have fallen somewhere, but could not find it." Then the Salmon said, "Give me some hot coals, Rattlesnake, I want to mend my boat with pine gum before I leave this place." Then the Rattlesnake brought out some hot coals, which the Salmon took and set the grass lodge on fire, and as the Rattlesnake was burning, said to him, "Rattlesnake, hereafter when more people come into your country you must not bite them with your arrows, but they must kill you wherever they find you or your people." Then the Salmon left and travelled a long distance when he saw the Wolf's lodge. He crawled up very slowly and found the Wolf's wife alone, but guarded by the Louse and the Flea. Then the Salmon said to the Louse, "I am the husband of the woman in that lodge, and if you will assist me I will give you the Wolf's head for your share," and to the Flea, "you shall have the Wolf's back and rump for your share." They both agreed to accept the offer and allowed the Salmon to enter the lodge. Then the Salmon and his wife planned how they should destroy the Wolf, as well as his two brothers who lived in the lodge also. The Salmon took a sharp knife and waited. Towards evening the oldest wolf returned carrying a deer on his shoulders, which he threw into the lodge and then went

away to wash his hands. He then returned and as he put his head into the door of the lodge, the Salmon struck him over the forehead with the knife and killed him. The woman then dragged the body back into the lodge where she covered it with robes.

Soon the next Wolf came, having a deer upon his shoulders, which he threw into the lodge and then went to the spring to wash his hands. He then returned and as he put his head into the lodge, the Salmon cut off his head. The woman then dragged the body into the lodge and hid it with the body of the oldest Wolf.

After a long time the youngest Wolf, who was a Shaman, returned with a deer upon his shoulders. His magic power enabled him to know that the Salmon was in the lodge, and he called out, "Salmon, come out of my lodge, I know that you are there and want to kill me; come out that I may fight you." The Salmon did not answer, and the Wolf came closer and again called out as before. The Salmon remained silent; when the Wolf came up and threw the deer into the lodge and went to the spring to wash his hands. When he again came toward the lodge, he said, "Salmon, I know you are in my lodge and want to kill me; now come out and fight me." The Salmon remained quiet, but after a short time asked the woman if the Wolf did not possess some charm or sacred rattle, by which means the Wolf could be induced to enter the lodge. The woman said that the Wolf had a rattle which, if used, would probably bring him in; whereupon she took it down and began to use it, at the same time telling the Wolf to enter the lodge, as she was going to throw the rattle into the fire. The Wolf then came nearer but would not enter until he saw her throw the rattle upon the burning coals, when he made a leap through the door, the Salmon at the

same time striking him upon the nose and splitting his body lengthwise, one-half falling upon the floor, while the other half sprang upon the fire, grasped the sacred rattle and passed up through the smoke-hole and onward to the summit of a high mountain.

Then the Salmon took his wife, and after giving the heads of the wolves to the Louse, and the backs and rumps to the Flea, returned to his own home.

There was a village near the base of the mountain upon which the Wolf took refuge, and every night the people could hear him howl. Then the Coyote said, "I wonder what can be wrong with the Wolf, he is crying so much." Then several of the people went to find the Wolf's lodge to take him some food, but he could not be found. Soon, people were attacked by the Wolf at night, and so many were killed that the Chief said, "Let us move away to another camp, if we stay here we shall all be killed." Then the Coyote said "You must all go, but let me remain, I will kill the Wolf." The tribe then moved away and the Coyote, who was a Shaman, transformed himself into a little boy. He dug a pit in the ground at the bottom of which he placed a log of wood, which he transformed into a dead man. Then the Coyote sat at the mouth of the pit and cried. When the Wolf heard a child crying, he came down from the mountain and, seeing the little boy, said, "Coyote, I know that is you, what is the matter with you?" But the Coyote only cried the harder and pointed down into the pit. Then the Wolf approached and asked, "Is that your father?" when the Coyote assented by nodding his head and crying still louder. Then the Wolf jumped into the pit, which the Coyote at once caused to sink deeper and deeper, so that the Wolf should not escape. The Coyote then took his knife and, as the Wolf jumped

up the sides of the pit to make his escape, the Coyote thrust the blade into the Wolf's head and killed him. The pit was then filled with dirt and leaves, and the Coyote returned to his camp, summoned his people to return, which they did; and there they still live in peace.

## NOTES.

\* Skō-lē'-pī. This signifies cooking in a depression in the ground, similar to the method adopted in preparing Kamass roots in the northwest, and mesal roots in Arizona. Hot stones form the floor of the pit, upon which the roots are laid, and covered with a layer of stones, earth, grass, etc.

† P'hui'-hue-u-ql's. The Cross-bill (*Curvirostra Americana*). It is said that at this time the bird had his mandibles distorted, which rendered his speech unintelligible to the others.

‡ χlūs'-ēn'k-tsū'. The Wild cat (*Lynx rufus*) frequently called Lynx, by the Indians. The word for the latter is sīn'-χū-tsō'. This act of the Coyote is supposed to account for the flat face of the animal.

¶ χlōs'-qtī-sū-mī-ě. The Panther (*Felis concolor*) is said to have received his long tail at this time, having previously been a Lynx (*L. Canadensis*).

# BULLETIN

OF THE

## ESSEX INSTITUTE.

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VOL. 15.      SALEM : APRIL, MAY, JUNE, 1883.      Nos. 4, 5, 6.

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### THE JESUITS.<sup>1</sup>

BY GEORGE H. HOSMER.

MR. HOSMER first spoke of the Romish church previous to the year 1500 ; of the corruption in the church and of the vast treasures poured into Rome by the immense number of persons flocking to the eternal city. St. Peter's was commenced and partly paid by this treasure. The Reformation under Martin Luther was next briefly traced, and the excitement caused by the protest of 1517 by Luther against the sale of indulgences. In 1491 Ignatius Loyola, the founder of the Society of Jesus, was born. He was of royal family and soon became famous as a bold and chivalrous gentleman and soldier, displaying great valor in war. In 1521, he suffered from a long and painful illness, the result of a wound, during which time he became interested in reading the lives of the saints and his thoughts were directed towards a religious life. From

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<sup>1</sup>[An abstract of a paper read at a meeting Monday evening, April 2, 1883.]

an active life in the field and from the emoluments of the court and camp, he turned his future to the austerities of the monastery and devoted himself to the formation of the Society of Jesus and the propagation of its doctrines throughout the world. With Peter Faber, Xavier and five others, the society was founded and missionary work commenced. After varying fortunes the Pope recognized the order, Loyola having been chosen supervisor. The society spread and became a power, and while Loyola lived it was for good; after his death the Jesuit order became corrupt as it grew in wealth and influence.

This year (1883) is the two hundred and fiftieth anniversary of the settlement of the Jesuit order in America. Marquette came to America and preached from the St. Lawrence to the Mississippi river, which last he is said to have discovered. The Jesuits also accompanied Lord Baltimore to Maryland in 1632. There were, in 1874, seventeen Jesuit colleges in the United States, and the sect numbered about 1062 persons.



#### ANNUAL MEETING, MONDAY, MAY 21, 1883.

THE annual meeting this evening at 7.30 o'clock. The PRESIDENT in the chair. Records of the last annual meeting were read and approved.

The reports of the Secretary, Treasurer, Auditor, Librarian, and the Curators and Committees were read, and duly accepted and ordered to be placed upon file.

Mr. T. F. HUNT, chairman of the committee upon nominations, reported the following list of officers, which was duly elected. Messrs. T. F. HUNT and F. ISRAEL having been requested to collect, assort and count the votes.



## OFFICERS ELECTED.

## PRESIDENT:

HENRY WHEATLAND.

## VICE-PRESIDENTS:

ABNER C. GOODELL, JR.  
FREDERICK W. PUTNAM.DANIEL B. HAGAR.  
ROBERT S. RANTOUL.

## SECRETARY:

GEORGE M. WHIPPLE.

## TREASURER:

GEORGE D. PHIPPEN.

## AUDITOR:

RICHARD C. MANNING.

## LIBRARIAN:

WILLIAM P. UPHAM.

## CURATORS:

*History*—HENRY F. WATERS.*Manuscripts*—WILLIAM P. UPHAM.*Archæology*—FREDERICK W. PUTNAM.*Numismatics*—MATTHEW A. STICKNEY.*Geology*—B. F. MCDANIEL.*Botany*—GEORGE D. PHIPPEN.*Zoölogy*—EDWARD S. MORSE.*Horticulture*—JOHN E. PEABODY.*Music*—JOSHUA PHIPPEN, JR.*Painting & Sculpture*—T. F. HUNT.*Technology*—EDWIN C. BOLLES.

## COMMITTEES:

*Finance:*The PRESIDENT, *Chairman ex off.*

HENRY M. BROOKS.

GEO. R. EMMERTON.

DAVID PINGREE.

The TREASURER, *ex off.**Library:*

CHARLES W. PALFRAY.

HENRY F. KING.

WILLIAM NEILSON.

WILLIAM D. NORTHEED.

THEODORE M. OSBORNE.

The LIBRARIAN, *ex off.**Publication:*

EDWARD S. ATWOOD.

ABNER C. GOODELL, JR.

EDWIN C. BOLLES.

H. F. WATERS.

JAMES A. EMMERTON.

T. F. HUNT.

*Lecture:*

ROBERT S. RANTOUL.

FREDERICK W. PUTNAM.

AMOS H. JOHNSON.

FIELDER ISRAEL.

ARTHUR L. HUNTINGTON.

*Field Meeting:*The SECRETARY, *Chairman ex off.*

GEORGE A. PERKINS, Salem.

GEORGE D. PHIPPEN, Salem.

GEORGE COGSWELL, Bradford.

FRANK R. KIMBALL, Salem.

FRANCIS H. APPLETON, Peabody.

EBEN N. WALTON, Salem.

NATHANIEL A. HORTON, Salem.

WINFIELD S. NEVINS, Salem.

EDWARD S. MORSE, Salem.

JOHN H. SEARS, Salem.

## RETROSPECT OF THE YEAR

compiled from the several reports read at the meeting and the remarks by several members in relation thereto, presents the work of the Institute in the various departments since the last annual meeting.

The past year has been one not specially eventful in the annals of the Institute, and there have been no important commemorative or social observances as have occurred in some of the previous years. The ordinary work of the society has gone smoothly. The various Regular and Field Meetings have been well attended. The publications have been issued with pages well filled with valuable historical and scientific papers. Our membership has held its own. Generous donations to the library, cabinet, and the treasury have been made. The number of visitors to the rooms has been large and the year may, with propriety, be called a prosperous one.

**MEMBERS.**—Changes occur in the list of our associates by the addition of new names and the withdrawal of some by resignation, removal from the county or vicinity, or by death.

## MEMBERS ELECTED MAY 1882 TO MAY 1883.

•	1882, June 20	GEORGE BURNHAM IVES, Salem.
	" " "	CHARLES F. POUSLAND, Salem.
	" " "	CHARLES A. BUXTON, Salem.
	" " "	FRANK A. BROWN, Salem.
	" " "	JEAN M. MISSUD, Salem.
	" " "	HARRIET KNIGHT KIMBALL, Salem.
	" " "	HATTIE L. KIMBALL, Salem.
	" " "	GEORGE RANDALL, Peabody.
	" Sept. 5	WILLIAM HENRY GOVE, Salem.
	" " "	PATRICK J. MC CUSKER, Salem.
	" " 19	MYRA HALL, Salem.
	" Dec. 5	ESTHER C. MACK, Salem.

1883, Jan.	15	HANNAH L. RANTOUL, Beverly.
"	"	LOUISE PRESTON DODGE, Danvers.
"	Feb. 5	EDMUND WATERS LONGLEY, Salem.
"	" 19	LAWRENCE CUNNINGHAM, Salem.
"	Mch. 5	BENJAMIN F. MC DANIEL, Salem.
"	"	CHARLES WHITNEY HADDOCK, Beverly.
"	" 20	JABEZ BALDWIN LYMAN, Salem.
"	Apr. 16	HENRY M. MEEK, Salem.

We have received information of the decease of fifteen during the year, who have been resident members.

OLIVER CARLTON, son of John and Mary (Weston) Carlton, born at Mount Vernon, N. H., July 20, 1801; graduated at Dartmouth college, 1824; a well known and distinguished Principal of the Latin School in Salem for many years; taught at Francestown, in 1825; tutor in Dartmouth, 1825-6; taught at Windsor, Vt., in 1827; Haverhill, Mass., Marblehead, Salem, Portsmouth, N. H.; and again at Salem; died at Salem, June 21, 1882.—Elected a member June 21, 1848.

GEORGE FOSTER FLINT, son of Addison and Mary E. (Foster) Flint; born at North Reading, Oct. 17, 1840; studied law in the office of George Wheatland, counsellor at law, Salem, and after admission to the Essex Bar, continued in the office, associated with Mr. Wheatland in business until his decease, which occurred June 23, 1882. He was well known as a conveyancer and examiner of titles of real estate. Elected a member Feb. 20, 1861.

JOSEPH J. RIDER, son of Joseph and Abigail (Janes) Rider, born at Salem, June 26, 1827. Master mariner, died at Gorea, West Coast of Africa, July 25, 1882. Elected a member Oct. 13, 1858.

ALBION S. DUDLEY, son of Edmund and Rebecca (Bangs) Dudley, born at Kingfield, Me., Aug. 6, 1816, died at Asbury Grove, Hamilton, Mass., July 12, 1882. Dentist in Salem. Elected a member May 6, 1867.

GEORGE K. PROCTOR, son of James K. and Lucretia (Blood) Proctor, born in Townsend, Mass., July 9, 1837, a photographer in Salem, afterwards a grocer, died at Salem July 27, 1882. Elected a member July 16, 1872.

ROBERT BROOKHOUSE, son of Robert and Eliza W. (Grafton) Brookhouse, born at Salem, March 3, 1823, merchant in Salem, associated with his father and others in the West Coast of Africa trade, died at his seaside residence in Marblehead, Aug. 2, 1882. An original member.

ELIZABETH ENDICOTT (GRAY) NEWHALL, daughter of James and Elizabeth (Endicott) Gray, born at Salem, Feb. 15, 1802; married April 14, 1829, Gilbert Grafton Newhall, merchant of Salem (see Hist. Coll. of Essex Institute, vol. vi, p. 127); died at Salem, Aug. 12, 1882. Elected a member Oct. 8, 1878.

JOSEPH E. FISKE, son of William and Dolly (Wellington) Fiske, born at Heath, Mass., Feb. 12, 1811. In early life, a teacher in Danvers, afterwards a practising dentist in Salem more than forty-five years, noted for his gift of invention. Died at Salem, Aug. 25, 1882. An original member.

PRISCILLA S. (HODGES) CLARK, daughter of Jonathan and Elizabeth (Ropes) Hodges, born Nov. 4, 1799, married John Clark Sept. 4, 1821, died at Salem, Oct. 12, 1882. Elected a member June 9, 1864. Mr. Clark, son of John and Lydia (Sanderson) Clark, was born in Waltham Mar. 14, 1796, gr. Harv. Coll. in 1816; soon after graduation was teacher of a private school, in Salem, for several years; in 1824 merchant in Boston; in 1830 agent of Merrimac Manf. Co., Lowell; in 1848 Treas. Great Falls Manf. Co., place of residence, Salem, where he died Jan. 28, 1851. (See "Records of the descendants of Hugh Clark of Watertown, Mass.," by John Clark, p. 75.

AUGUSTUS STORY, son of William and Elizabeth (Pat-ten) Story, born at Marblehead, April 6, 1812, removed to Salem with his parents in 1819, gr. Harv. Coll. in 1832. A lawyer by profession, for many years President and Treasurer of the Holyoke Mutual Fire Ins. Co. Died at Salem Oct. 19, 1882. Elected a member Mch. 29, 1848.

SAMUEL CALLEY, son of William and Mary (Becket) Calley, born at Salem, April 14, 1821, a painter; mayor of Salem for the years 1872, 1881 and 1882; d. Jan. 1, 1883. Elected a member June 3, 1872.

WILLIAM WHITAKER, son of William and Sarah (Harriman) Whitaker, born in Haverhill, Mass., Oct. 25, 1797, came to Salem, April 1, 1823, a carpenter; died at Hamilton, Feb. 2, 1883. Elected a member Sept. 21, 1864.

CAROLINE SALTONSTALL, daughter of Leverett and Mary Elizabeth (Sanders) Saltonstall, born at Salem, Sept. 2, 1815; died at Salem, unmarried, Feb. 23, 1883. Elected a member July 6, 1864.

JAMES OSBORNE SAFFORD, son of Ebenezer and Hannah (Osborne) Safford, born in Danvers June 21, 1819, died at his residence in Salem March 18, 1883; he was largely interested in the manufacture and sale of leather; place of business in Boston. Elected a member Jan. 4, 1854.

WILLIAM HENRY PRINCE, son of John and Loisa (Lander) Prince, and grandson of Rev. John Prince, LL.D., who was pastor of the First Church in Salem 1779 to 1836, and was noted for his scientific attainments, born in Salem, Nov. 15, 1817, gr. Harv. Coll. 1838, and of the Medical School in 1841, commenced practice in Salem; Superintendent of the Northampton State Lunatic Asylum, 1856 to 1864; connected with the water-cure at Clifton Springs,

N. Y., 1870-1878 ; from 1878 to his decease, a practitioner in Newton, where he died May 15, 1883. An original member.

**FIELD MEETINGS.** These have been, perhaps, of more than usual interest and well attended. During the season four have been held.

*First* at the Middlesex Fells, Stoneham, on Saturday, June 17, 1882, by invitation of the Middlesex Institute. During the forenoon pleasant rambles were made in the vicinity of Bear Hill, a delightful spot in the Fells, the place selected for the gathering. At 2 P. M. President Dame of the Middlesex Institute called the meeting to order and extended a cordial welcome to the members of the Essex Institute. He spoke of the work and objects of the two societies and alluded to several of the historical points of interest in this locality. Mr. George E. Davenport, secretary of the Middlesex Institute, read a poem entitled "Dame Nature's Greeting." The President of the Essex Institute responded, thanking the members of the Middlesex society for the kind invitation to unite with them on this interesting occasion. Mr. John Robinson of Salem read a paper on our "native trees." Prof. Asa Gray of Cambridge, by invitation from the chair, gave some reminiscences of Darwin and his teachings, and alluded to a recent visit to him in England. Appropriate remarks were made by Mr. John H. Sears of Salem, Rev. Joseph Banvard of Neponset, Mr. Williamson of Kentucky and others. Mr. Sears spoke of the plants noticed this day ; Mr. Banvard, of the benefit of these meetings, and Mr. Williamson, of the flora of his own state and that of Massachusetts.

*Second*, on Wednesday, July 12, 1882, at the Dummer Academy, Byfield, by invitation of the Trustees. This

school was organized in 1763 in accordance with the will of its patron and founder, Lieut. Gov. William Dummer,<sup>1</sup> under the direction of Samuel Moody,<sup>2</sup> its first principal, who held this position for thirty years and was a very successful teacher. During that period, the number of his pupils averaged over seventy.

A renewed effort has recently been made to restore to old Dummer its pristine glory and reputation.

Under the recently appointed head, John W. Perkins, for several years the accomplished principal of the Classical and High School in Salem, the prospects are encouraging for a realization of the sanguine hopes of the trustees and its friends, in the accomplishment of this so praiseworthy and desirable an object.

A pleasant ride by rail to Newburyport; thence by covered barges to the place of meeting, passing through a region of great natural attractiveness and rich in historic lore; a cordial reception by the trustees and Mr. and Mrs. Perkins, now comfortably domiciled in their new residence; a generous lunch at noonday; and the afternoon speaking of a pleasant character, and in general, having reference to the past history of the institution and its future prospects, with frequent allusions to those of its graduates who have well done their part in the great drama of life; will

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<sup>1</sup> William Dummer, Lieut. Governor of the Province, and the acting Governor 1723-28, m. Catherine, dau. of Gov. Joseph Dudley, died 10 Oct., 1761. This farm was his country seat and the mansion house was his residence. These were included in his bequest for the foundation of the Academy. He was the son of Jeremiah Dummer, and a grandson of Richard Dummer of Bishopstoke, Hants, who was born there in 1599, came to New England in 1632 and was one of the first settlers in Newbury; he returned to England and came again in 1638.

<sup>2</sup> Rev. Samuel Moody,<sup>3</sup> the preceptor of Dummer. Harv. Coll., 1746; died at Exeter, N. H., Dec. 14, 1795, aged 70 years. He was son of Rev. Joseph,<sup>4</sup> of York, Me., Harv. Coll., 1718; a grandson of Rev. Samuel,<sup>5</sup> Harv. Coll., 1697; a gr. grandson of Caleb<sup>2</sup>; a gr. gr. grandson of William<sup>1</sup>, who came in 1634 (it was said a saddler) from Ipswich, Co. of Suffolk. He was first of Ipswich, afterwards in 1635 of Newbury, where he continued to reside. He died 25 Oct., 1673.

render this day one to be long remembered by all who were present on this interesting occasion.<sup>3</sup>

*Third meeting* at Magnolia, on Wednesday, August 9, 1882. This place has been, for a long time, a favorite seaside resort. The old road was a pleasant drive, bordered with the wild rose and other flowering plants, with occasional hamlets, whose occupants obtained their livelihood from the land or the briny deep, winding through these fragrant woods and skirting the borders of the green fields that come down even to the beaches that are hard and smooth, and to the rocks whose hoary cliffs extend into the sea, scarred, wrinkled, and worn.

This territory, especially that portion contiguous to the coast, has for the most part, within the past few years, been bought by the wealthy denizens of the city who make this their summer home. The elegant villas, recently built, with their quaint architecture dot the coast, and with their red roofs are in striking contrast with the sombre green of the woods. The name of this locality has also, recently, been changed, and instead of Kettle Cove we have Magnolia, appropriately named from the beautiful flower, whose northern habitat is in close proximity. These woods extending inland from the coast, diversified with ponds and inlets, rocky hills and meadows, the habitat of many rare plants, have been made famous by the herborizations of William Oakes of Ipswich, a very distinguished botanist, who died in 1848, leaving an extensive collection of beautifully prepared specimens of our native flora with many valuable notes and observations. Peter Magnol of Montpellier, France, a very distinguished botanist during the close of the seventeenth and the early part of the eighteenth centuries, in whose honor the name

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<sup>3</sup> See Hist. Coll. Essex Inst., vol. XIX.



of *Magnolia* was given to this genus of beautiful plants, rendered the herborization of Montpellier celebrated. Many botanists flocked thither desirous to enjoy the society and the benefit of his guidance and instruction.

The forenoon was spent in visiting the interesting localities and in the afternoon the meeting was held in a rustic pavilion, tendered to the Institute by the kindness of Mr. Barnard Stanwood.

The President called the meeting to order, and alluded in a few brief remarks to the meeting held in this place some twenty-one years since and noted the great change that has taken place since that time. Vice President F. W. Putnam, being called upon, gave an interesting account of his recent explorations in Tennessee and Ohio. He urged upon his hearers the importance of collecting Indian relics which are very valuable in any museum, for examination and reference. Mr. John H. Sears of Salem, Dr. Morse of Gloucester, President of the Cape Ann Literary and Scientific Association and Prof. William North Rice of Wesleyan University made pertinent remarks. The latter gentleman alluded to the great difference geologically between this rock-bound coast and the valley of the Connecticut, which was his place of residence and the field of his explorations. A vote of thanks was gratefully tendered to Mrs. Maria H. Bray and Mr. Stanwood for courtesies extended during this pleasant visit to *Magnolia*.

*Fourth meeting, Wednesday, August 30, 1882.* Meeting at Topsfield. The party from Salem went in barges, those from other towns found their way thither by the cars or private carriages. The usual routine was observed relative to the rambles in the forenoon and the visiting of places of interest; the most notable, perhaps, is the old Capen House, now owned by Charles H. Holmes. It is

built upon the old Garrison house principle, and its architecture is like that of two centuries ago. Mr. Holmes says that it was built in 1651. The afternoon session was held in the Town Hall. The President in the chair. Vice President, Robert S. Rantoul of Salem, was introduced and read an interesting paper entitled "The Essex Junto — The Long Embargo — And The Great Topsfield Caucus of 1808."<sup>4</sup> Mr. Charles J. Peabody and Dea. Augustine Peabody of Topsfield gave interesting facts and traditions of the town. Hon. J. J. H. Gregory of Marblehead spoke of Forestry and the cultivation of trees. Mr. John H. Gould read extracts from the records of the town. He is the present town clerk. Samuel P. Fowler of Danvers, now and ever since its organization a member of the Institute, gave reminiscences of its history, stating many interesting facts in that connection. Hon. N. A. Horton of Salem made a few remarks supplementary to Mr. Rantoul's paper. After the adoption of a vote of thanks to the people of Topsfield for their coöperation and courtesies, adjourned.

**MEETINGS.** Regular meetings occur on the first and third Monday evenings of each month. At these or special meetings, the following communications were received or lectures delivered.

On *Monday, Oct. 9, 1882*, Mr. Adoniram C. Orne of Marblehead read a paper "On popular errors in regard to the average duration of life."<sup>5</sup>

*Monday, Nov. 20, 1882.* Mr. John Robinson gave an account of the opening of a shellheap under the direction of the Peabody Academy of Science, on the banks of the Ipswich River; a large and valuable collection of articles

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<sup>4</sup> See the Hist. Coll. Essex Inst., Vol. XIX, p. 226.

<sup>5</sup> See Bulletin Essex Inst., Vol. XIV, p. 133.

was found. Many of them were exhibited at the meeting.<sup>6</sup> On the same evening Vice President F. W. Putnam spoke of the results of a search among the heaps on the coast of Maine.<sup>7</sup>

*Monday, Jan. 15, 1883.* Mr. S. S. Blanchard, formerly of Boston, now of Fargo, Dakota, gave a familiar talk on Dakota, alluding to its resources, the fertility of its soil, its large crops raised with little labor, the mineral products, etc. He also spoke of the social advantages, schools, churches, and other public institutions. Wheat farming was particularly noticed and a large picture of the harvesting of wheat on the Ingraham farm was shown; on these large farms machinery is being largely introduced and farming is reduced to a system.

*Monday, Feb. 26, 1883.* E. W. Kinsley, Esq., of Boston, spoke informally on Mexico and its business resources. He alluded to the steamers between New York and Vera Cruz in complimentary terms. The beautiful scenery of the country by rail from Vera Cruz through the mountainous districts was fully described and also the magnificent views as one descends into the city of Mexico; the hotels were comfortable and rapidly adopting modern improvements. A visit to one of the large haciendas with the immense crops stored in large warehouses was fully sketched. A very enthusiastic and hopeful account of the Mexican Central and Atchison and Topeka Railroads was given.

*Monday, March 5, 1883.* Vice President F. W. Putnam spoke on the recent explorations that he had made in the valley of the Little Miami River, in Ohio,

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<sup>6</sup> See Bulletin Essex Inst., Vol. XIV, p. 158.

<sup>7</sup> See Bulletin Essex Inst., Vol. XIV, p. 161.

including an account of the singular altar mounds and the interesting objects found upon the altars. The lecture was illustrated by diagrams, photographs and specimens.

*Monday, April 2, 1883.* Rev. George H. Hosmer read a paper on "the Jesuits."

*Monday, May 14, 1883.* Mr. Robert S. Rantoul read a memoir on our late associate member James O. Safford.<sup>8</sup> Rev. Charles T. Brooks of Newport, R. I., read a memoir on our late associate member, Augustus Story.<sup>9</sup>

The following have been presented and printed in the publications :

"Essex County and the Indians," a lecture before the Beverly Lyceum, Nov. 20, 1832, by Mr. Robert Rantoul, sen.,<sup>10</sup> communicated by Mr. R. S. Rantoul.

"Origin of Salem Plantation." Allotments of Land in Salem to Men, Women, and Maids," by Prof. Herbert B. Adams of Johns Hopkins University.<sup>11</sup>

"The Family of John Perkins of Ipswich," by George A. Perkins, M. D.<sup>12</sup>

"Common Fields in Salem," by Prof. Herbert Adams.<sup>13</sup>

"The family of William Townsend of Boston," by Henry F. Waters.<sup>14</sup>

"The Early Settlers of Rowley, Mass., including all who were here before 1662, with a few generations of their descendants," by George B. Blodgette, A. M., of Rowley.<sup>15</sup>

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<sup>8</sup> Hist. Coll. Essex Inst., Vol. XX, p. 81.    <sup>9</sup> Hist. Coll. Essex Inst., Vol. XX, p. 115.    <sup>10</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 126.    <sup>11</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 153.    <sup>12</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 213.    <sup>13</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 241.    <sup>14</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 269.    <sup>15</sup> Hist. Coll. Essex Inst., Vol. XIX, p. 297.

"A Note on the authenticity of the Portraits of Gov. Endecott," by Mr. R. S. Rantoul.<sup>16</sup>

"Sketch of the Family of Thomas Townsend of Lynn, Joseph Townsend of Boston, and a few English Notes relating to the name of Townsend, by Henry F. Waters.<sup>17</sup>

"Salem Meadows, Woodland, and Town Neck," by Prof. Herbert B. Adams.<sup>18</sup>

"Notice of Charles Davis of Beverly, Librarian of Essex Institute," by Mr. Robert S. Rantoul.<sup>19</sup>

"Carcinological Notes, No. V," by Mr. J. S. Kingsley.<sup>20</sup>

"Catalogue of the Flora of Oak Island, Revere, Mass., with notes," by Herbert Young; "Introduction and Summary" by Mr. John Robinson.<sup>21</sup>

"Arrow makers at Pine Grove, by Mr. John Robinson.<sup>22</sup>

A SOCIAL MEETING of the members and their families was held in the rooms on the evening of Jan. 1, 1883. Mr. Alban Andr  n of Beverly gave a familiar talk on Sweden, illustrating his remarks by lantern views. Simple refreshments were served.

RECEPTIONS. Wednesday, May 31, 1882. During the evening a reception was tendered to Mr. Raymond Lee Newcomb, on his return to Salem from his perilous voyage to the Arctic regions in the steamer "Jeannette." The large hall on the second floor was thrown open and after a few words of welcome from the President, and an address from Vice President D. B. Hagar, Mr. Newcomb gave a brief account of his trip and related some of the experiences of the expedition. At the close of his remarks Mr. Newcomb was introduced to the members and their families.

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<sup>16</sup> Hist. Coll. Essex Inst., Vol. XX, p. 1. <sup>17</sup> Hist. Coll. Essex Inst., Vol. XX, p. 37. <sup>18</sup> Hist. Coll. Essex Inst., Vol. XX, p. 52. <sup>19</sup> Hist. Coll. Essex Inst., Vol. XX, p. 73. <sup>20</sup> Bulletin Essex Inst., Vol. XIV, p. 105. <sup>21</sup> Bulletin of Essex Inst., Vol. XIV, p. 141. <sup>22</sup> Bulletin Essex Inst., Vol. XIV, p. 163.

On Friday, Sept. 8, 1882, at noon, President Chester A. Arthur visited the rooms. There was no ceremony or formality. A few members happened to be present and escorted him through the building and about the grounds. He was accompanied by his private secretary Phillips, Surrogate Rollins of New York, and Capt. Green of the "Despatch."

Friday, Nov. 10, 1882. Dr. William B. Carpenter, of England, was in Salem, the guest of Robert S. Rantoul, Esq. The forenoon was spent in visiting the State Normal School, the Court Houses, East India Marine Hall, and other objects of interest. In the afternoon he was in the rooms of the Institute where he received calls from ladies and gentlemen of our city.

By the joint invitation of the Institute and the Peabody Academy of Science, the Boxford Natural History Society on Wednesday, May 31, 1882, The President and faculty of Wellesley College, on Monday, June 12, 1882, and the West Newbury Natural History Club, on Oct. 28, 1882, visited Salem on the respective days named, to examine the collections in the East India Marine Hall, the libraries and collections in Plummer Hall and other objects of interest.

**LECTURES.** A course of eight Lectures, under the direction of the lecture committee, has been delivered, as follows: *First*, Alban Andren of Beverly, "Sweden," Wed., Nov. 22, 1882. *Second*, Frederick A. Ober, of Beverly, "Mexico," Wed., Nov. 29, 1882. *Third*, G. M. Towle, "Eugenie, ex-Empress of France," Wed., Dec. 6, 1882. *Fourth*, G. M. Towle, "John Bright," Wed., Dec. 13, 1882. *Fifth*, G. M. Towle, Wed., Dec. 20, 1882, "The Irish Struggle." *Sixth*, G. M. Towle, "Victor Hugo," Wed., Dec. 27, 1882. *Seventh*, I. J. Osburn,

"Steam," Wed., Jan. 3, 1883. *Eighth*, I. J. Osburn, "The Storage of Electricity," Wed., Feb. 21, 1883.

In addition to the above, by an arrangement made with the Trustees of the Peabody Academy of Science, two courses of free lectures were given. *First course*, by Prof. C. C. Bessey, of the State Agricultural College, Iowa, on Thursday afternoons, Jan. 18, 25, and Feb. 1, 1883, three lectures on "Problems in Vegetable Physiology:" I. "Green slime and yeast Plants." II. "Structural and physiological development of the vegetable kingdom." III. "The evolution of the Flower." *Second course*: five lectures by Prof. J. Walter Fewkes, an assistant in the Museum of Comparative Zoölogy, Cambridge. "Corals and Coral Islands," on the afternoons of Wednesdays, Jan. 17, 24, 31, Feb. 7, 14, 1883.

CONCERTS. Under the personal direction of the curator of music, two chamber concerts have been given with great acceptance. This was the fourteenth concert season of the Institute. *First*, Friday evening, Feb. 16, 1883. The selections of the two trios by Beethoven and Schubert formed a happy contrast, the latter perhaps being the more brilliant. It was very pleasant to hear Mr. Arthur W. Foote again in Salem after so long an interval. He was ably assisted by Messrs. Gustave Dannreuther, Wulf Fries, and Miss Louise Gage. *Second*, Monday, March 26, 1883. Mr. Hiram G. Tucker, of Boston, gave a piano recital. He had the assistance of Miss Grace F. Dalton, soprano vocalist. Both parties did themselves much credit in their respective numbers and the concert was both enjoyable and interesting.

EXCURSIONS. *Friday*, June 9, 1882, visited Plymouth,

tarried at the Samoset House and returned on Saturday in the afternoon. The attractive objects: "The national monument to the forefathers," which stands eighty-one feet from the ground, not finished; Pilgrim Hall, built in 1824, rebuilt in 1880 by the liberality of Joseph Henry Stickney, Esq., of Baltimore, Md., containing many relics brought over by the Pilgrims, and several large and striking paintings, representing the landing and ideas connected therewith; Plymouth Rock returned to the original spot and now covered by a solid granite canopy of elaborate architectural design; Burial Hill and other places of interest, were visited by some of the party.

*Thursday, Aug. 3, 1882.* A trip along the North Shore to Pigeon Cove in the steamer General Bartlett, Capt. J. O. Davis, commander. The party landed at the Cove and spent about an hour ashore, then across the bay to Swampscott and along the Marblehead shore to the place of departure.

*Wednesday, Sept. 6, 1882.* A party left for an excursion to the summit of Mount Moosilauke. A special car direct from Salem to Plymouth, N. H., without change, thence to the village of Warren, where the mountain ascent is made on buckboards or in wagons, to the breezy Point House, a bright roomy hotel with broad piazzas and a wide view of the unbroken forest, then to the Tip Top House. This hotel, as well as the Breezy Point House, will be found in all respects comfortable, while the mountain scenery is unsurpassed. Returned on Saturday the ninth.

PUBLICATIONS have been issued as heretofore: the Bulletin, Vol. xiv, and the Historical Collections, Vol. xix. The exchange list, with few exceptions, continues the same as last year.



**LIBRARY.**—The additions to the Library for the year (May, 1882 to May, 1883) have been as follows :

*By Donation.*

Folios, . . . . .	24
Quartos, . . . . .	160
Octavos, . . . . .	891
Duodecimos, . . . . .	296
Sexdecimos, . . . . .	54
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Total of bound volumes, . . . . .	1,425
Pamphlets and serials, . . . . .	10,143
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Total of donations, . . . . .	11,568

*By Exchange.*

Folios, . . . . .	1
Quartos, . . . . .	18
Octavos, . . . . .	95
Duodecimos, . . . . .	4
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Total of bound volumes, . . . . .	118
Pamphlets and serials, . . . . .	2,172
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Total of exchanges, . . . . .	2,290

*By Purchase.*

Quartos, . . . . .	5
Octavos, . . . . .	107
Duodecimos, . . . . .	179
Sexdecimos, . . . . .	15
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Total of bound volumes, . . . . .	306
Pamphlets and serials, . . . . .	197
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Total of purchases, . . . . .	503
Total of donations, . . . . .	11,568
Total of exchanges, . . . . .	2,290
Total of purchases, . . . . .	503
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Total of additions, . . . . .	14,361

Of the total number of pamphlets and serials, 6,447 were pamphlets, and 6,065 were serials.

The donations to the Library for the year have been received from one hundred and fifty-six individuals and

forty-one departments of the General and State governments and societies, five of which are foreign. The exchanges from one hundred and fifty-six societies and incorporate institutions, of which eighty-four are foreign; also from editors and publishers.

The annual examination of the Library has been made. Of the eight volumes that were missing last year, five have been returned; thirteen others are now missing from their places.

Donations or exchanges have been received from the following:

	Vols.	Pam.
Albany, N. Y., State Library, . . . . .	7	1
Almy, James F., . . . . .		1
Alnwick, Eng., Berwickshire Naturalists' Club, . . .		1
American Association for the Advancement of Science,	1	
Amherst College Library, . . . . .		1
Amiens, Société Linnéenne du Nord de la France, . .		11
Anagnos, M., South Boston, . . . . .		1
Andrews, Hiram, . . . . .	5	2
Andrews, William P., . . . . .		53
Appleton, F. H., Peabody, . . . . .		1
Appleton, William S., Boston, . . . . .		1
Archæological Institute of America, . . . . .	1	3
Atkinson, Edward, Boston, . . . . .		1
Baltimore, Md., Johns Hopkins University, . . . .	9	
Baltimore, Md., Johns Hopkins University Library of Historical and Political Science, . . . . .		7
Baltimore, Md., Peabody Institute, . . . . .		1
Bamberg, Naturforschende Gesellschaft, . . . . .		1
Bancroft, Rev. C. F. P., Andover, . . . . .		1
Barton, William G., . . . . .		77
Belfast, Eng., Naturalists' Field Club, . . . . .		2
Bemis, Miss Caroline, . . . . .		3
Berlin, Gesellschaft Naturforschender Freunde, . . .		1
Berlin, Verein zur Beförderung des Gartenbaues, . .		24
Berlin, Zeitschrift für die gesammten Naturwissenschaften,	1	
Bern, Naturforschende Gesellschaft, . . . . .		2
Bolles, Rev. E. C., D. D., . . . . .	21	151
Bologna, Accademia delle Scienze, . . . . .		1

	Vols.	Pam.
Bonn, Naturhistorischer Verein, . . . . .	1	2
Boston, American Academy of Arts and Sciences, . .	1	1
Boston, Appalachian Mountain Club, . . . . .		2
Boston, Board of Health, . . . . .		16
Boston, Bostonian Society, . . . . .		1
Boston, City of, . . . . .	6	
Boston, City Hospital, . . . . .	1	
Boston, City Hospital Medical Library, . . . . .	1	
Boston, Massachusetts General Hospital Trustees, .		1
Boston, Massachusetts Historical Society, . . . .	2	
Boston, Massachusetts Horticultural Society, . .		2
Boston, Massachusetts Institute of Technology, .		3
Boston, Massachusetts Medical Society, . . . .		1
Boston, Massachusetts State Library, . . . . .		1
Boston, M. O. L. L. U. S. Council of Commandery of Massachusetts, . . . . .	1	
Boston, National Association of Wool Manufacturers,		5
Boston, New England Historic Genealogical Society, .	2	7
Boston, New England Manufacturers' and Mechanics' Institute, . . . . .	2	
Boston, Public Library, . . . . .		5
Boston, Scientific Society, . . . . .		3
Boston, Society of Natural History, . . . . .		17
Boston, Zoölogical Society, . . . . .		2
Boutwell, F. M., Groton, . . . . .		1
Bovey, Henry T., Montreal, . . . . .	1	2
Braunschweig, F. Vieweg und Sohn, . . . . .		3
Bremen, Naturwissenschaftlicher Verein, . . . .		1
Briggs, Mrs. Edward T., . . . . Newspapers,		28
Brigham, L. F., . . . . .	1	
Brinley, Francis, Newport, R. I., . . . . .		1
Bristol, Eng., Naturalists' Society, . . . . .		3
Brooklyn, N. Y., Long Island Historical Society, . .		1
Brooks, Mrs. Henry M. . . . . Newspapers,		2
Brown, Augustus S., . . . . .	1	
Brown, F. H., Boston, . . . . .	1	
Brown, Henry A., . . . . .	1	
Brown, Samuel J., Salisbury, . . . . .		1
Browne, Albert G., . . . . .	3	
Brünn, Naturforschender Verein, . . . . .	1	
Brunswick, Me., Bowdoin College, . . . . .		2
Bruxelles, Société Belge de Microscopie, . . . .	1	12
Bruxelles, Société Entomologique de Belgique, . .	1	1

	Vols.	Pam.
Bruxelles, Société Malacologique de Belgique, . . .	2	16
Buenos Aires, Sociedad Científica Argentina, . . .		6
Buffalo, N. Y., Society of Natural Sciences, . . .		1
Buffalo, N. Y., Young Men's Association, . . .		1
Burchard, Horatio C., Washington, D. C., . . .		3
Burns, Charles E., . . .		10
Bützow, Verein der Freunde der Naturgeschichte, . .		1
Caen, Académie Nationale des Sciences, . . .	2	
Calcutta, Geological Survey of India, . . .		7
Caldwell, Augustine, Ipswich, . . .		2
Caldwell, Rev. S. L., Poughkeepsie, N. Y., . . .		1
Caller, James M., . . .	1	
Cambridge, Harvard University, . . .	1	3
Cambridge, Museum of Comparative Zoölogy, . . .		5
Cambridge, Nuttall Ornithological Club, . . .		4
Cambridge, Peabody Museum of American Archæology and Ethnology, . . .		1
Carpenter, Rev. C. C., Mt. Vernon, N. H., . . .		2
Case, Theodore S., Kansas City, Mo., . . .		1
Cherbourg, Société Nationale des Sciences Naturelles, .	1	1
Chicago, Ill., Headquarters Military Division of the Missouri, . . .		1
Chicago, Ill., Historical Society, . . .	1	1
Chicago, Ill., Public Library, . . .		1
Christiania, La Commission géodésique internationale, .		4
Christiania, K. N. Frederics Universitets, . . .	1	6
Christiania, Videnskabs Selskabet, . . .	3	
Cincinnati, O., Mechanics' Institute, . . .		4
Cincinnati, O., Society of Natural History, . . .		4
Cleveland, H. W. S., Springfield, Ill., . . .		2
Cleveland, O., Western Reserve and Northern Ohio Historical Society, . . .		1
Cole, Miss Caroline J., . . .		3
Cole, Mrs. N. D., . . . Newspapers, . . .		84
Columbia, Mo., State University, . . .		1
Currier, John M., Castleton, Vt., . . .		2
Curwen, George R., . . .		1
Curwen, James B., . . .	34	41
Cushing, L. B., Newburyport, . . .	10	
Cutter, A. E., Charlestown, . . .		1
Danzig, Naturforschende Gesellschaft, . . .	1	
Darmstadt, Verein für Erdkunde, . . .	1	
Davenport, Ia., Academy of Natural Science, . . .		2

	Vols.	Pam
Dennis, W. D., . . . . .		3
Dodge, James H., Boston, . . . . .	1	
Donnell, E. J., New York, N. Y., . . . . .		2
Dresden, Naturwissenschaftliche Gesellschaft Isis,		3
Dublin, Royal Irish Academy, . . . . .		8
Dudley, A. M., . . . . .	9	
Eads, H. L., So. Union, Ky., . . . . .	1	
Edinburgh, Royal Society, . . . . .	1	
Edmands, T. F., Boston, . . . . .	1	
Ellis, Henry P., Milwaukee, . . . . .		1
Emden, Naturforschende Gesellschaft, . . . . .		1
Emmerton, James A., . . . . .	6	54
Epping Forest and County of Essex Naturalists' Field Club, . . . . .		1
Erfurt, K. Akademie gemeinnütziger Wissenschaften, .		1
Erlangen, Physikalisch-medicinische Societät, . .		1
Falmouth, Eng., Royal Cornwall Polytechnic Society, .		1
Firenze, Istituto di Studi Superiori, . . . . .		12
Folsam, A. A., Boston, . . . . .		3
Foote & Horton, . . . . . Newspapers,	4	314
Fox, G. V., Washington, D. C., . . . . .		2
Frankfurt, a. M., Senckenbergische naturforschende Gesellschaft, . . . . .	1	1
Frankfurt, a. M., Zoologische Gesellschaft, . . . .		6
Freiburg, Naturforschende Gesellschaft, . . . . .		1
Gatschet, Albert S., Washington, D. C., . . . . .		2
Genève, L'Institut National Genèvois, . . . . .	1	
Genève, Société de Physique et d'Histoire Naturelle, .	1	
George, M. C., Washington, D. C., . . . . .		1
Gillis, James A., . . . . .	17	148
Glasgow, Natural History Society, . . . . .		1
Göttingen, K. Gesellschaft der Wissenschaften, , .	2	
Gould, John H., Topsfield, . . . . .		1
Green, Samuel A., Boston, . . . . .	82	322
Hager, Albert D., Chicago, Ill., . . . . .		1
Halifax, N. S., Institute of Natural Science, . . . .		1
Halle, K. Leop.-Carolinische D. Akademie der Naturforscher, . . . . .		4
Hamburg, Verein für Naturwissenschaftliche Unterhaltung, . . . . .	1	2
Hamilton, R. I., Narragansett Historical Publishing Company, . . . . .		4
Hammond, Joseph, . . . . .		1

	Vols.	Pam.
Harlem, Société Hollandaise des Sciences, . . . .		3
Hart, Charles H., Philadelphia, Pa., . . . .		1
Hart, Rev. Samuel, Hartford, Ct., . . . .		1
Haskell, Mrs. A. M., West Roxbury, . . . .	1	
Hassam, John T., Boston, . . . .		1
Hazen, W. B., Washington, D. C., . . . .		1
Hildeburn, Charles R., Philadelphia, Pa., . . . .		1
Hill, B. D., Peabody, . . . . Newspapers,		4
Hill, H. A., Boston, . . . .	1	
Hingham, First Parish, . . . .	1	
Hoar, E. R., Concord, . . . .		1
Hobart Town, Government of Tasmania, . . . .	1	3
Hobart Town, Royal Society of Tasmania, . . . .		1
Holmes, John C., Detroit, Mich., . . . .		1
Horton, N. A., . . . .	1	
Huguet-Latour, L. A., Montreal, . . . .	3	24
Hunnewell, James F., Charlestown, . . . .	1	
Hunt, Miss S. E., . . . .		12
Hunt, T. F., . . . .	166	188
Hunt, Mrs. Thomas, . . . .	46	
Illinois Department of Agriculture, . . . .		5
Israel, Rev. F., . . . . Newspapers,	2	40
James, U. P., Cincinnati, Ohio., . . . .		2
Jenison, O. A., Lansing, Mich., . . . .	1	
Johnson, D. H., . . . .	8	24
Johnson, Samuel, Estate of the late, . . . . Newspapers,	79	1744
Kimball, Mrs. James, . . . .	4	4
Kimball, Jonathan, Chelsea, . . . .		1
Kjöbenhavn, K. D. Videnskabernes Selskab, . . . .		3
Königsberg, Physikalisch-ökonomische Gesellschaft, . . . .		3
Lansing, Mich., State Library, . . . .	25	7
Latham, Williams, Bridgewater, . . . .	1	
Lausanne, Société Vaudoise des Sciences Naturelles, . . . .	3	2
Lawrence, George N., New York, N. Y., . . . .		6
Leach, Henry C., . . . .	1	
Lee, F. H., . . . . Newspapers,	1	343
Leeds, Philosophical and Literary Society, . . . .		1
LeMans, Société d'Agriculture, Sciences, et Arts de la Sarthe, . . . .		2
Lincoln, Francis H., Boston, . . . .		1
London, Royal Society, . . . .		7
Lord, G. R., . . . .	31	28
Lothrop, D. & Co., Boston, . . . .	2	

	Vols.	Pam.
Lowell, Old Residents' Historical Association, . . . . .		1
Lund, Carolinische Universität, . . . . .	4	6
Lüneburg, Naturwissenschaftlicher Verein, . . . . .		1
Lyon, Académie des Sciences, Belles-Lettres et Arts, . . . . .	1	
Lyon, Société d'Agriculture, . . . . .	2	
Lyon, Société Linnéenne, . . . . .	1	
Mack, David, Hampton, Va., . . . . .	8	31
Mack, Miss Esther C., . . . . .	1	12
Madison, Wis., State Library, . . . . .		1
Madrid, Sociedad Española de Historia Natural, . . . . .		1
Malden, Middlesex Institute, . . . . .		1
Manchester, Rev. L. C., Lowell, . . . . .		18
Manning, Robert, . . . . .		50
Manson, A. S., Boston, . . . . .	1	9
Marburg, Gesellschaft zur Beförderung der gesammten Naturwissenschaften, . . . . .		4
Marsh, Rev. W. H. H., New Brunswick, N. J., . . . . .	1	
Marshall, John W., Rockport, . . . . .		1
Massachusetts, Commonwealth of, . . . . .	2	
McDanolds, James S., Trenton, N. J., . . . . .	2	
Meek & Fielden, . . . . .	1	
Meek, Henry M., . . . . .	1	
Merrill, N. F., . . . . .		1
Merrill, William, Jr., West Newbury, . . . . .		29
Mexico, Museo Nacional, . . . . .		3
Middletown, Conn., Museum of Wesleyan University, . . . . .		1
Milburn, Mrs. W., . . . . .	2	
Montreal, Natural History Society, . . . . .		1
Montreal, Société Historique, . . . . .		1
Moulton, J. T., Lynn, . . . . .	3	
München, K. B. Akademie der Wissenschaften, . . . . .		14
Münster, Westfälischer Verein für Wissenschaften u. Kunst, . . . . .		1
Nagle, J. T., New York, N. Y., . . . . .		2
Nevins, W. S., . . . . . Newspapers,		4
Newark, N. J., Historical Society, . . . . .	3	2
New Haven, Conn., Academy of Arts and Sciences, . . . . .		2
New Haven, Conn., Yale College Library, . . . . .		4
New York, Academy of Sciences, . . . . .		8
New York, American Geographical Society, . . . . .		7
New York, American Museum of Natural History, . . . . .		5
New York, Chamber of Commerce, . . . . .	1	
New York, Genealogical and Biographical Society, . . . . .		3

	Vols.	Pam.
New York, Historical Society, . . . . .	1	
New York, Linnæan Society, . . . . .	1	
New York, Mercantile Library Association, . . . . .		2
Northampton, Secretary of Smith College, . . . . .		11
Northend, W. D., . . . . .	106	143
Northey, William, . . . . .	6	146
Norwegian No. Atlantic Expedition, Editorial Committee, . . . . .		6
Odell, Charles, . . . . .	10	12
Oliver, Henry K., . . . . .	1	
Osgood, John C., . . . . .	17	12
Palfray, C. W., . . . . .	33	274
Palmer, B. P., Boston, . . . . .	1	
Paris, Société d'Acclimatation, . . . . .		11
Paris, Société d'Anthropologie, . . . . .		5
Paris, Société des Etudes Historiques, . . . . .		8
Peabody, G. L., . . . . . Newspapers,	2	2
Peabody, John P., . . . . .	1	
Peabody Institute, Peabody, . . . . .	1	188
Peet, Rev. S. D., Clinton, Wis., . . . . .		4
Perkins, A. C., Exeter, N. H., . . . . .		4
Perkins, George A., . . . . .		23
Perley, Jonathan, . . . . .	2	
Perley, Sidney, . . . . .		2
Perry, Rev. W. Stevens, Davenport, Ia., . . . . .		1
Philadelphia, Pa., American-Belgian Chamber of Commerce, . . . . .		1
Philadelphia, Pa., Historical Society of Pennsylvania, . . . . .		4
Philadelphia, Pa., Library Company, . . . . .		2
Philadelphia, Pa., Mercantile Library, . . . . .		4
Philadelphia, Pa., Numismatic and Antiquarian Society, . . . . .		3
Philadelphia, Pa., Woman's Medical College, . . . . .		1
Philadelphia, Pa., Zoölogical Society, . . . . .		2
Pickering, Miss Mary O., . . . . . Newspapers,		162
Pingree, David, . . . . .	6	101
Plumer, Miss Mary N., . . . . . Newspapers,		3
Pool, Wellington, Wenham, . . . . .		2
Poole, W. F., Chicago, Ill., . . . . .		1
Preston, Charles P., Danvers, . . . . .		1
Providence, R. I., Public Library, . . . . .	1	18
Providence, R. I., Rhode Island Historical Society, . . . . .		1
Putnam, Mrs. Eben, . . . . .		48
Putnam, F. W., Cambridge, . . . . .	1	4
Quebec, Literary and Historical Society, . . . . .		2



	Vols.	Pam.
Ramsay, Alexander, London, Eng., . . . . .		4
Rantoul, R. S., . . . . . Newspapers,	60	2383
Regensburg, K. b. botanische Gesellschaft, . . . .	2	
Regensburg, Zoologisch-mineralogischer Verein, . .		1
Rice, William, Springfield, . . . . .		1
Riga, Naturforschender Verein, . . . . .		1
Roads, Samuel, Jr., Marblehead, . . . . .	2	
Robinson, E. P., Saugus, . . . . . Newspapers,		
Robinson, John, . . . . .	9	67
Ropes, Rev. W. L., Andover, . . . . .		1
Sale, John, Chelsea, . . . . .	7	
Salem, Peabody Academy of Science, . . . . .	163	1503
San Francisco, Cal., Academy of Science, . . . .		1
San Francisco, Cal., Mercantile Library Association, .		1
Savannah, Ga., Georgia Historical Society, . . . .		1
Scudder, Samuel H., Cambridge, . . . . .		1
S'Gravenhage, Nederlandsch-entomologische Vereeniging, . . . . .		4
Smith, George Plumer, Philadelphia, Pa., . . . .	2	3
South Hadley, Mt. Holyoke Female Seminary, . . .		1
Soule, Charles C., Boston, . . . . .	2	23
Springfield, Mo., Drury College, . . . . .		3
Stanwood, James R., Boston, . . . . .	1	
Stettin, Entomologischer Verein, . . . . .	1	
St. Gallen, (St. Gallische naturwissenschaftliche Gesellschaft, . . . . .	1	
St. John, N. B., Natural History Society, . . . .		1
St. Louis, Mo., Missouri Historical Society, . . . .		4
St. Louis, Mo., Public School Library, . . . . .		2
Stockholm, Entomologiska Föreningen, . . . . .		5
Stockholm, R. Académie des Sciences, . . . . .	13	1
Stone, Eben F., Washington, D. C., . . . . .	18	170
Stone, Robert, . . . . . Newspapers,		
Stone, William, . . . . . Newspapers,	72	405
Stowers, Mrs. Nathaniel, . . . . .	10	2
St. Pétersbourg, Académie Impériale des Sciences, .	1	3
Strahan, Thomas, Chelsea, . . . . .		1
Sydney, N. S. W., Department of Mines, . . . .	1	
Sydney, N. S. W., Royal Society of New South Wales, .	3	2
Taunton, Eng., Somersetshire Archæological and Natural History Society, . . . . .	1	
Taunton, Public Library, . . . . .		1

	Vols.	Pam.
Teele, Rev. A. K., Milton, . . . . .		1
Tenney, Jonathan, Albany, N. Y., . . . . .		1
Thronthjem, K. Norske Videnskabers Selskab, . . . . .		1
Titus, Rev. Anson, Jr., So. Weymouth, . . . . .		2
Tokio, Japan, University of, . . . . .	2	1
Topeka, Kans., State Historical Society, . . . . .		1
Toronto, Canadian Institute, . . . . .		1
Tuckerman, J. F., . . . . .	1	
Unknown, . . . . .	2	11
Upsal, Societas R. Scientiarum, . . . . .	1	
U. S. Bureau of Education, . . . . .		14
U. S. Bureau of Ethnology, . . . . .	1	
U. S. Chief of Engineers, . . . . .	10	
U. S. Chief Signal Officer, . . . . .	3	5
U. S. Coast and Geodetic Survey, . . . . .	1	
U. S. Commission of Fish and Fisheries, . . . . .	1	17
U. S. Department of the Interior, . . . . .	63	3
U. S. Department of State, . . . . .	138	
U. S. Hydrographic Office, . . . . . Charts,		
U. S. National Board of Health, . . . . .		10
U. S. National Museum, . . . . .		27
U. S. Nautical Almanac Office, . . . . .	1	
U. S. Naval Observatory, . . . . .	1	1
U. S. Patent Office, . . . . .	3	51
Walter, Joseph R., Wilmington, Del., . . . . . Newspapers,		
Waring, George E., Jr., Newport, R. I., . . . . .		2
Washington, D. C., Smithsonian Institution, . . . . .	2	8
Waters, C. C., Jamestown, D. T., . . . . . Map,		
Waters, H. F., . . . . .	27	298
Waters, J. Linton, . . . . .	44	145
Waters, Stanley, . . . . . Newspapers,	1	28
Waterville, Me., Colby University, . . . . .		2
Watson, Miss C. A., . . . . . Map,		1
Webb, Miss Sarah F., . . . . .	10	
Whipple, George M., . . . . .	1	4
Whipple, Mrs. George M., . . . . .	3	
Whitcher, Mary, Shaker Village, N. H., . . . . .		13
Whitney, Mrs. Mary W., Lawrence, . . . . .		31
Whittier, Charles C., Boston, . . . . . Genealogical Chart,		
Wien, K. k. Zoologisch-botanische Gesellschaft, . . . . .	1	
Wien, Verein zur Verbreitung naturwissenschaftliche Kenntnisse, . . . . .	1	

	Vols.	Pam.
Wiesbaden, Nassauischer Verein für Naturkunde, . . .	2	
Wilkes-Barre, Pa., Wyoming Historical and Geological Society, . . . . .		2
Willson, Rev. E. B., . . . . .		116
Wilmington, Delaware Historical Society, . . . .		1
Wilson, John & Son, Cambridge, . . . . .	1	
Winnipeg, Historical and Scientific Society of Manitoba, . . . .		5
Winsor, Justin, Cambridge, . . . . .		34
Worcester, American Antiquarian Society, . . . .		3
Worcester, Society of Antiquity, . . . . .		1
Würzburg, Physikalisch-medicinische Gesellschaft, . . . .	1	1

The following have been received from editors or publishers:—

American Journal of Science.	Nation.
Canadian Naturalist.	Naturalist's Leisure Hour and Monthly Bulletin.
Cape Ann Bulletin.	Nature.
Danvers Mirror.	Newton Transcript.
Essex County Statesman.	Our Dumb Animals.
European Mail.	Peabody Press.
Fireside Favorite.	Quaritch's Catalogue.
Gardener's Monthly and Horticulturist.	Sailors' Magazine and Seamen's Friend.
Ipswich Chronicle.	Salem Gazette.
La Bibliophilie.	Salem Observer.
Lawrence American.	Salem Post.
Lynn Bee.	Salem Register.
Magnolia Leaves.	Turner's Public Spirit.
Marblehead Messenger.	West Newbury Era.
Medical Register.	Zoologischer Anzeiger.
Musical Herald.	

AN ART EXHIBITION opened on Tuesday evening, May 30, 1882. In some respects it was far superior to its predecessors, although those given in former years have proved very successful. The influence of such exhibitions can be noticed in the steady increase from year to year in the number of exhibitors and the progress developed in the interest of the general public relative to art matters. There were on exhibition from about one hundred and

twenty-five contributors, nearly four hundred specimens in the various departments of art, including pictures from the amateur's pencil up to the elaborate oil painting, decorated ware, plaques, panels, etc., in extensive and beautiful array. The arrangement was very effective, and the hall very attractive.

The following is a list of the contributors.

Geo. W. Harvey.  
 Frank W. Benson.  
 Miss Edith Rantoul.  
 Anson Daniels.  
 Mrs. W. H. A. Putnam.  
 Miss B. A. Putnam.  
     " A. B. Kilham.  
     " M. W. Haskell.  
 O. W. H. Upham.  
 Anna R. Thacher.  
 Miss M. M. Brooks.  
     " I. S. Jackson.  
     " J. S. Warden.  
     " A. M. Quimby.  
     " A. G. Pingree.  
     " Minnie Pond.  
     " K. Pond.  
 Mrs. N. A. Frye.  
 Miss A. F. Perkins.  
     " Ellen M. Nichols.  
     " M. R. Nason.  
     " H. M. King.  
     " Fanny L. Story.  
 Mrs. H. H. Davis.  
 Miss S. Ellen Pratt.  
 Mrs. Chas. Sewall.  
     " Geo. Harrington.  
 Arthur H. Hayward.  
 Geo. Newcomb.  
 Miss Alice M. Batchelder.  
 Joseph Ropes.  
 Miss Delia Sheldon.  
     " Agnes W. Endicott.

Mrs. C. L. Read.  
 Miss Hattie L. Kimball.  
     " Sarah E. Smith.  
     " A. L. Chadwick.  
     " E. W. "  
 Mrs. E. V. Emilio.  
 Miss S. S. Kimball.  
     " J. A. Ward.  
 Mrs. J. T. Mooney.  
     " K. T. Woods.  
 Mrs. J. F. Hill.  
 Master Henry Whipple.  
 H. B. H. Harrington.  
 Mrs. J. C. Abbott.  
 Miss Carrie Goldthwaite.  
     " L. J. Grant.  
     " Bessie F. Lord.  
 J. J. Redmond.  
 Miss Mary A. Batchelder.  
 Mrs. C. N. Symonds.  
 Miss L. M. Symonds.  
     " H. W. Brown.  
     " Mary K. Robinson.  
 Mrs. J. Robinson.  
 Pupils of Miss A. G. Pingree.  
 Miss Edith Harlow.  
 Master Arthur F. Harlow.  
 Mrs. J. H. Roberts.  
 Miss A. B. Holden.  
     " Edith B. Dalton.  
     " B. P. Smith.  
     " E. R. Pickering.  
     " Sarah B. Balch.

Miss E. W. Fiske.	Miss C. L. Grant.
Charles Norris.	Mr. E. C. Larrabee.
Miss A. P. Putnam.	Miss Ida Tappan.
“ F. Emerson.	“ Julia Barker.
“ M. Swan.	“ Lizzie B. Gifford.
Mrs. J. Battis 2d.	“ Lizzie L. Read.
Miss Mary C. Torrey.	“ Maggie Bolles.
“ C. L. Adams.	Geo. A. May.
Mrs. George S. Osborne.	Arthur W. Dow.
Miss E. R. Edmands.	Miss A. P. Pitman.
“ M. E. Phippen.	Miss Mary L. King.
Mrs. D. Kelham, jr.	“ H. F. Buxton.
Miss Lucy B. Hood.	Mrs. N. G. Symonds.
“ C. B. Harrington.	“ Martha G. Smith.
“ N. G. Peirce.	Miss Edith O. Morse.
“ L. C. G. Peirce.	“ A. S. Tukey.
“ C. F. Chase.	“ Clara L. Pitman.
“ Rose Farndale.	“ L. L. Symonds.
“ Eva “	Mrs. Joseph Symonds.
Mrs. G. P. Osgood.	Albert I. Whipple.
“ H. P. Ives.	Mrs. C. F. Quincy.
Master I. P. Symonds.	Miss L. L. A. Very.
“ J. G. Morse.	

Mr. John M. Murray, from the Lawrence pottery works in Beverly was present with his potter's wheel and gave practical illustrations of the manner that shapeless and unpromising clay can be transformed into vessels of usefulness and ornament.

Frequent and valuable additions to the art library are made by the curator of painting and sculpture, and the number of persons interested in this subject who consult this library is increasing. Many of the volumes contain valuable and useful information which the student could not obtain readily elsewhere.

**HORTICULTURAL EXHIBITION.** The annual Horticultural Exhibition was held on Wednesday and Thursday, Sept.

20 and 21, 1882, although the season was very unpropitious for a large and fine display, on account of the excessive drought, yet there was a creditable showing, and the hall had a most attractive appearance by the judicious arrangement of the various contributions.

Good specimens of vegetables were received from Plummer Farm School, Salem, Andrew Nichols of Danvers, J. Page Weston of Danvers; W. A. Ireland, E. Goss and Clarence Murphy of Salem. Contributors of fruit were as follows: Charles A. Ropes, George F. Brown, George Bowker, A. C. Locke, N. C. Locke, Charles Higbee, S. Endicott Peabody, J. C. Rogers, E. Verry, Caleb Buffum, Miss S. O. Russell, Miss E. P. Richardson, James P. Cook, Fred. Lamson, George D. Glover, G. H. Frye, jr., Mrs. Woodbury, Mrs. E. H. Valentine, E. Goss and others.

The centre of the hall was occupied by a large stand of foliage plants. Among them were some beautiful specimens of ferns in fine condition from the collection of S. Endicott Peabody at Kernwood; also fine foliage and flowering plants in pots from H. W. Putnam, William A. Ireland, H. C. Merriam and Mrs. C. Buffum.

Mrs. L. P. Weston of Danvers, W. A. Ireland, George D. Phippen, J. C. Rogers, H. C. Merriam, Miss Mary Ropes, Chas. A. Putnam, Mrs. W. F. Gardner and others, had very creditable exhibits of cut flowers. John H. Sears presented a collection of native plants.

The judges, Messrs. J. E. Peabody, R. C. Manning and Hugh Wilson, awarded the prizes as follows:—Best green-house plants, S. Endicott Peabody; coleus, Henry W. Putnam; cut flowers, Mrs. L. P. Weston of Danvers. Pears, best Beurre Bosc, George F. Brown; best Beurre d' Anjou, N. C. Locke; best Beurre Diel, C. A. Ropes; best Beurre Superfin, C. A. Ropes; best Belle Lucrative,

G. H. Frye, jr.; best Duchess d'Angoulême, N. C. Locke; best Louise Bonne de Jersey, S. E. Peabody; best Lawrence, A. C. Locke; best Seckel, F. Lamson; best Flemish Beauty, Mrs. Woodbury.

Apples, best Gravenstein, Mrs. E. H. Valentine; best Baldwin, C. A. Ropes; best Porter, Caleb Buffum.

Grapes, Best Native, George D. Glover and Mrs. J. Wilson; best Foreign, S. E. Peabody and J. C. Rogers; best Delaware, Charles Higbee.

Best collection of vegetables, Plummer Farm School.

Gratuities were awarded to H. C. Merriam and J. C. Rogers for flowers; Andrew Nichols for vegetables; William A. Ireland for tomatoes.

**MUSEUM.** The specimens in natural history, including those in archæology, which have been given during the year are on deposit with the Trustees of the Peabody Academy of Science, in accordance with previous arrangements. Those of an historical character or that possess an artistic interest have been arranged in the rooms.

The following may be specified as contributors :

Shepard Devereux Gilbert, Miss Dorcas C. Nourse, Charles T. Jenkins, Rev. Joseph Banvard, of Neponset, A. A. Galloupe, Beverly, T. F. Hunt, George Nichols, Chicago, Ill., Peabody Academy of Science, Estate of the late Samuel Johnson, Miss Lydia Pope, Raymond Lee Newcomb, Rev. William H. Halley, John Robinson, A. C. Orne, Marblehead, Charles H. Allen, Ellen and Robert Hale Bancroft, Beverly, John H. Langmaid, Mrs. Francis Dodge, Danvers, William M. Hill, Benjamin O. Pierce, Beverly, William P. Upham, Mrs. Eben Putnam, B. D. Hill of Peabody, Peter Thatcher, Boston, James B. Nichols, Mrs. James Kimball, Elbridge G. Putnam, Philadelphia, Joseph W. Stone, Rev. B. F. McDaniel, O. W. H. Upham, Mrs. Lydia C. Nichols, Rev. F. Israel.

The most important of the historical donations are, Door Latch from the old Parris House; piece of the root

of an apple-tree from the grave of Roger Williams; Baluster from the Old South Church, Beverly, Baluster from the Hancock House, Boston; First Shoe ever pegged by machinery; Spoon used on board the frigate Constitution; some of Gen. George Washington's hair.

**FINANCIAL.**—The Treasurer's Report of the receipts and expenditures of the past year (condensed for printing).

#### RECEIPTS.

Balance on hand at commencement of year	.	.	.	.	\$376 84
<i>Hist. Soc. Fund.</i>					
Dividends of stocks,	.	.	.	.	32
<i>Nat. Hist. Soc. Fund.</i>					
Dividends of stocks,	.	.	.	.	36
<i>Davis Fund.</i>					
Interest of bonds,	.	.	.	.	391 70
<i>Ditmore Fund.</i>					
Interest of bonds and stocks	.	.	.	.	180 40
<i>Manuscript Fund.</i>					
Interest of Savings Bank,	.	.	.	.	23 02
Gift of Geo. Plumer Smith of Phila.,	.	.	.	.	50
					<hr/> 73 02
<i>Ladies Fair Fund.</i>					
Interest of bonds,	.	.	.	.	60 00
<i>Howes Fund.</i>					
Interest of bonds,	.	.	.	.	1,527 50
<i>Story Fund.</i>					
Legacy from the estate of the late Aug. Story,	.	.	.	.	10,000 00
<i>General Account.</i>					
Dividends of stocks,	.	.	.	.	25 00
Return state tax,	.	.	.	.	12 07
Assessments of members,	.	.	.	.	905 00
Publications,	.	.	.	.	741 31
Lectures, Concerts, Excursions, etc.,	.	.	.	.	429 81
Salem Athenæum, parts of bills	.	.	.	.	197 51
					<hr/> \$2310 70
Sale of bonds	.	.	.	.	\$2000 00
premium,	.	.	.	.	134 50
					<hr/> 2,134 50
Salem National Bank, Treasurer's note,	.	.	.	.	500 00
					<hr/> \$17,622 66



## EXPENDITURES.

<i>Historical.</i>	
Binder's bill, . . . . .	75 00
<i>Natural History and Horticulture.</i>	
Binder's bill, . . . . .	75 00
<i>Ditmore Fund.</i>	
Annuity to F. I. Perkins, . . . . .	110 00
Amount omitted, 1879 and 1880, . . . . .	20 00
	<hr/> 130 00
<i>Manuscript Fund.</i>	
Interest and gift, added to fund, . . . . .	73 02
<i>Davis Fund.</i>	
Interest added to fund, . . . . .	11 70
<i>Derby Fund.</i>	
Deposits in Salem Savings Bank, . . . . .	
Reported on debit in last account, . . . . .	490 00
<i>Story Fund.</i>	
Investments; transferred from the estate, . . . . .	10,000 00
<i>General Account.</i>	
Salaries, . . . . .	2,168 61
Publications, . . . . .	1,459 13
Books and binding, . . . . .	185 75
Salem Athenæum, Rent and Libraries, . . . . .	350 00
Fuel, Gas, Express, Postage, etc., . . . . .	453 07
	<hr/> 4,616 56
Paid note of Institute and interest since 1875, . . . . .	2,186 74
Balance, cash on deposit at Salem National Bank, . . . . .	54 64
	<hr/> \$17,622 66
The invested funds of the Institute are now, . . . . .	<hr/> \$45,766 78

In March, this year, the Institute acting in coöperation with several of the Historical Societies of this state, which were desirous to ascertain the condition of the various city and town records, sent a circular and also a carefully prepared blank form to each town and city clerk in Essex county, inviting their coöperation and requesting that the form be filled out in accordance with the instructions annexed, and returned to the Institute; also suggesting that great care be taken to make every statement precise and accurate especially as to the dates; these returns when collected and summarized, will be printed, constitu-

ting a valuable account of the records of our various municipalities.

The New England Historic-Genealogical Society, having appointed Mr. Henry F. Waters of Salem, an officer of the Institute, its agent in London for the purpose of making genealogical and historical investigations among the English records, and having called for funds in aid of this purpose, a committee, composed of Messrs. Rantoul, Emmerton and Hunt, was appointed to solicit subscriptions. The subject was brought to the notice of a few persons interested in Mr. Waters and his mission, and the sum of \$525.00 was collected and sent to the committee of the above-named society, who have this duty in charge.

In closing this retrospect of the year's work of the Institute, the officers indulge in the hope, that, ere long its friends will devise some plan, by which suitable accommodations will be provided, for the proper arrangement of its library and collections.

# BULLETIN

OF THE

## ESSEX INSTITUTE.

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VOL. 15.      SALEM: JULY, AUG., SEPT., 1883.      Nos. 7, 8, 9.

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### NOTICE OF THE DEATH OF CHARLES TIMOTHY BROOKS.

At the regular meeting, Monday, June 19, 1883, after the routine business was transacted, the President called the attention of the meeting to the recent death of Rev. Charles Timothy Brooks of Newport, R. I., a member of the Institute, and said that it seemed proper that some notice should be taken of his decease.

REV. E. B. WILLSON said that while he was not prepared to make a formal address at this meeting, he wished to pay his tribute of respect to the memory of Mr. Brooks, and to express his admiration of the high character and delightful Christian spirit of the deceased. He had known him intimately of late years, and deemed it a great privilege to have had such a friend. In the course of his remarks, Mr. Willson said that on the occasion of the North Church Centennial celebration Mr. Brooks had been most helpful in making it a success. He also said that he had made the death of Mr. Brooks the theme of his discourse on Sunday.

REV. E. C. BOLLES said that he was glad to add his word to endorse the remarks of the last speaker, and

moved that the President and Mr. Willson be a committee to prepare appropriate resolutions on the death of Mr. Brooks, also to arrange to hold at some later day, a more formal and an appropriate memorial service under the auspices of the Institute. The motion was unanimously adopted.

MR. ALBERT G. BROWNE and DR. GEORGE A. PERKINS remarked on the kindly and genial disposition and spirit of Mr. Brooks, and gave some personal reminiscences of his life. Dr. Perkins said that they had been life-long acquaintances and were in early years schoolmates, and the friendship had never waned. In the year 1834 he made a journey on foot to the White mountains with Mr. Brooks. This jaunt was always pleasantly remembered by both of them, and was alluded to in their frequent meetings, and it had been the expressed intention of both Mr. Brooks and himself, that, if they lived, the fiftieth anniversary of that excursion should be passed by them on the top of Mt. Washington.

MR. ROBERT S. RANTOUL spoke of the literary character of the deceased and dwelt especially on his remarkable facility and genius in his translation of German poetry. He said :

IN the death of Charles T. Brooks we have lost another of those sons of Essex County who have made a place for themselves in American letters. I never heard Mr. Brooks preach, and my estimate of his mental qualities is made up from sources quite apart from his efforts in the pulpit. I know him, as most of us have known him, through his occasional verses, through his translations, through his sunny face and his cordial greeting. He was successful as a translator. He had that fineness of appreciation,—delicacy of touch and fibre,—faculty for giving him-

self over without reserve to his author, a sort of literary self-renunciation, self-surrender, which is to my mind the *sine quâ non*, the beginning and end of successful effort to fairly interpret and render in good faith the spirit of another's work.

He had also the drollery, the love of the grotesque, the quiet, humorous enjoyment of the extravagant vagaries of German wit, of that sly fun that so pervades home life and street life in Germany, which made it easy for him to transfer that peculiar atmosphere to his American reprint. His "Max and Maurice," for instance, is, of its kind, inimitable. No one is too old, no one is too young, to laugh over it. But he was equally fortunate in his more serious efforts in German translation. I will not enumerate these works nor characterize them. The death of Freiligrath, the great revolutionary, democratic, people's poet of modern Germany,—the Burns, the Whittier, of the Teuton race, occurred while I was at Stuttgart, where he had been residing, and when the first anniversary of it came about, I was still at Stuttgart. In Southern Germany the custom is to celebrate the day of the death rather than of the birth of those to whom the world owes something, and this first anniversary of Freiligrath's death was noticed by the English and American residents of Stuttgart with memorial exercises in which many Germans, who understood English, united with the English-speaking admirers of the poet. He had lived much in England, had purposed emigrating to America whither he had already sent forward a pioneer in the person of his son, and was well acquainted with Longfellow (whom he had translated,) and with Mr. Brooks, and was read and admired by Whittier. I was asked to make the address on the occasion, and in that connection took some pains to seek out the best English translations of some of Freiligrath's characteristic poems.

From a considerable collection of English translations made by English, Scotch and Irish writers of note as well as by Mr. Brooks, I selected as best suited to my purpose one which I will read, and, lest my local partiality might mislead me as to the quality of Mr. Brooks' work, I consulted competent critics on the spot, including the family of the German poet himself, and found that they shared my preference. I read, from the published proceedings of the occasion, Mr. Brooks's version of

#### THE EMIGRANT'S DEPARTURE.

Ye men, that from your necks set down  
 Your heavy baskets on the earth  
 Of bread, from German corn baked brown,  
 By German wives, on German hearth,  
 And you, with braided tresses neat,  
 Black Forest maidens, slim and brown,  
 How careful, on the sloop's green seat,  
 You set your pails and pitchers down !  
 Ah ! oft have home's cool, shady tanks  
 Those pails and pitchers filled for you !  
 By far Missouri's silent banks  
 Shall these the scenes of home renew,—  
 The stone rimmed fount,— the village street,  
 Where oft ye stooped to chat and draw,—  
 The hearth,—and each familiar seat,—  
 The pictured tiles your childhood saw !  
 Soon, in the far and wooded west,  
 Shall log-house walls therewith be graced :  
 Soon many a tired and tawny guest  
 Shall sweet refreshment from them taste :  
 From them shall drink the Cherokee,  
 Faint with the hot and dusty chase.  
 No more from German vintage ye  
 Shall bear them home in leaf-crowned grace !  
 Oh say ! Why seek ye other lands ?  
 The Neckar's vale hath wine and corn :  
 Full of dark firs the Schwarzwald stands :  
 In Spessart rings the Alp-herd's horn !

Ah! In strange forests you will yearn  
 For the green mountains of your home,—  
 To Deutschland's yellow wheat-fields turn,—  
 In spirit o'er her vine-hills roam!

How will the form of days grown pale  
 In golden dreams float softly by,  
 Like some old legendary tale,  
 Before fond memory's moistened eye!

The boatman calls! Go hence in peace!  
 God bless you,—wife and child and sire!  
 Bless all your fields with rich increase,  
 And crown each faithful heart's desire!

REV. FIELDER ISRAEL referred to the help Mr. Brooks had been to him in many ways and endorsed the views of the previous speakers. He read some verses of the deceased, entitled, "A winter morning on the Merrimac."

Letters were read from Rev. B. F. McDaniel and Mr. William P. Andrews, regretting their necessary absence from the meeting.

REV. MR. MCDANIEL writes:—

"I regret very much that a previous engagement, which I cannot set aside, will prevent me from attending, this evening, the meeting in memorial of Mr. Brooks, whom to know was to see the kingdom of Heaven. I should rejoice to hear the loving tributes paid by those who knew him better than I did."

MR. ANDREWS writes as follows:

DEAR DR. WHEATLAND,

It is a matter of sincere regret to me that I cannot be personally present with you on Monday evening, to render what little tribute I may to the worth of our dear friend, Mr. Brooks; and I beg you or Mr. Willson will kindly add my word to what may be said on that occasion.

"Half Lamb, half Cowper," Mr. Silsbee has most happily called our friend, and the thought is a picture of his blended wit and simple goodness.

Simplicity, and goodness itself were personified in his gentle, unobtrusive life ; and as he lately read his tribute to Mr. Story in your hall, many of us must have been struck with the applicability of his poetic praise of Mr. Story's worth to his own. His appearance, his manner and matter on that occasion, must remain forever memorable to those who were fortunate enough to hear him.

The man himself was always a delightful poem, of which his fluent, tender verse hardly gives us a full report. None the less he lived in an atmosphere of poetry which, flowing spontaneously from his mind and pen, brightened and uplifted many sorrowing hearts, and adorned many a serious or gay assemblage.

It seems to me his greatest success in literature, however, was in his most difficult undertaking, the then untried rendering of the German masterpiece into English, in its original metres. Only those who have attempted that task, or carefully compared the leading translations word by word with the German text, can appreciate the difficulty of that accomplishment, or the remarkable success with which our poet has met it. However much the loudly-blown trumpet of praise may exaggerate the merits of another version of Goethe's *Faust* that owes a deep and yet unacknowledged obligation to Mr. Brooks' work ; the fact remains that our friend's work has never been equalled by any published translation, in fidelity to the letter, or to the feeling of the original—a fact the leading journals have lately noticed, and which was admirably stated some years since in a formal article on the subject contributed to the "New Englander."

But while it is our duty to record here the debt under



which Mr. Brooks' faithful and loving labors in this, and many another admirable translation, have placed the literatures of the two great Teuton families, we must with mournful hearts acknowledge the personal obligation we all feel in recalling his gracious life of varied usefulness and beauty.

The charm of perpetual youth that surrounded his simple, unpretentious spirit; the warm appreciation of his friends, and ready word of kindly sympathy and encouragement; the delight of his cordial manner, and mellow flavor of his mingled wit and wisdom, made his annual return, to these his native haunts, always a memorable pleasure to all of us. He was indeed a MAN, whose like we may not look upon again.

I am, my dear sir, sincerely yours,

WM. P. ANDREWS.

The PRESIDENT gave some account of the class of 1832 at Harvard, of which Mr. Brooks was a member, and mentioned the interesting as well as remarkable fact that, in the year when Mr. Brooks entered college, twenty-four applicants from Salem were examined for admission to the various colleges, of whom nineteen obtained their degree in regular course: of the twenty-four, seventeen were admitted to Harvard, and thirteen of these graduated at the expiration of four years. This is probably an unparalleled record in the educational history of the city.

The following is a list of those admitted to the different colleges in 1828.

AMHERST. *James Oliver* left during the Freshman year; afterwards entered Colby University, receiving his degree in 1838. A teacher and joint author of "Wreck of the Glide;" died in Cambridgeport, Jan., 1845.

BROWN. *Joseph Farnum*, a physician and dentist, died in Salem, Nov. 22, 1874.

*Samuel Randall*, died at Madison, N. J., April 20, 1862, æt. 50, Rector of Episcopal Church in that town.

DARTMOUTH. *Richard Manning Chipman*.  
*Edward Brown Emerson*.

HARVARD. *Haley Forrester Barstow*, a lawyer, died at Grand Rapids, Mich., Aug. 13, 1871.

*Charles Timothy Brooks*, the subject of this notice.

*George William Cleveland*, merchant, died at Pontotoc, Miss., Sept. 20, 1848.

*James Arthur Cleveland* was admitted, but did not join the class; artist, died at Tarrytown, N. Y., May 8, 1868.

*William Sewall Cleveland*, left at the close of the Sophomore year.

*William Fabens*, lawyer, died at Marblehead, March 11, 1883.

*John Forrester*, left during the Freshman year, engaged in mercantile pursuits, died Feb., 1841.

*William Prescott Gibbs*, lawyer, died in Lexington, Mass., July 27, 1852.

*Benjamin Manning Hodges*, left on account of ill health, at the close of the Freshman year, died at Salem, June 30, 1830.

*Charles Grafton Page*, physician, electrician, Examiner U. S. Patent Office, died at Washington, D. C., May 5, 1868.

*Archer Ropes*, lawyer in Baltimore, Md., died Oct. 2, 1855.

*John Boardman Silsbee*, merchant, died in Salem April 1, 1867.

*John Henry Silsbee*.

*William Silsbee*.

*Augustus Story*, lawyer, Pres. Holyoke Ins. Co., Salem, died Oct. 19, 1882.

*William Henry West*, lawyer, died at Indianapolis, Ind., August, 1838.

*Henry Wheatland*.

YALE. *Horace Lorenzo Conolly*; transferred his connections to Trinity college in the senior year and received his degree from that college. Authorized to take the name of *Horace Ingersoll*, Nov. 16, 1858.

*John Spencer Wallis*.

Of the above list, eight are now living after the lapse of fifty-five years from the time of admission. These are the four who entered Yale and Dartmouth, and four of those who entered Harvard. Of the twenty-four admitted to college in 1828, fourteen were from the Latin School in Salem, and the others from private schools.

## THE FIRST NOTICE OF THE PINE GROVE OR FOREST RIVER SHELLHEAP.

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BY F. W. PUTNAM.

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It now seems strange that any one could for a moment believe the great deposits of oyster, clam, quahaug and other shells along the seacoast, and of the fresh-water clam along our interior rivers, were formed by natural agencies, but fifty years ago they were almost universally considered as natural deposits ; the result of upheaval of ocean beds or ancient beaches.

Dr. Ducatel, in his report on the geology of Maryland, pronounced the great heaps of oyster shells on the Chesapeake to be artificial productions, and he seems to have been the first geologist in this country to call attention to their true origin, which he did in the following words :—

“Some of the other agricultural resources of the state, besides those derived from the use of marl, have been already alluded to in the preceding sections. There is one especially, scarcely inferior in value to the marl, consisting of extensive accumulations of oyster shells, evidently made by the aboriginal inhabitants of the country ; — since they are found to enclose human skeletons, deer horns, tools, coarse pottery, etc., plainly significant of their origin. The accumulations are found in many parts of the eastern shores and their principal localities are laid down in the map.”—Report of J. T. Ducatel, State Geologist of Maryland, Dec. 29, 1834.

These deposits had been referred to by several of the

early writers on the habits of the Indians of the Atlantic coast as the refuse piles of the Indians, and even fifty years ago there were local traditions of their being the camping grounds of Indians, but these statements were not among the general possessions of the geologists, who were obliged to study these recent deposits in the same way that they studied the beds of fossils. Some fossil shell-beds were known, and as great stress had been laid upon the uprising of sea beaches, it became the accepted theory that all similar beds or heaps of shells were owing simply to the uprising of the coast.

In 1841 Mr. Lardner Vanuxem, a distinguished geologist on the New York Survey, made a communication before the meeting of American Geologists and Naturalists in which he gave his reasons for differing from Mr. T. A. Conrad, who seems to have persisted in the theory that the shell-beds were of natural origin,<sup>1</sup> and showed that the association of the shells with stone arrowheads and fragments of pottery proved their artificial origin, which was confirmed by the fact that the shell-beds were deposited upon the natural surface of the soil, and that under them were the remains of cedar trees which had formerly grown on the spot. Thus, seven years after the statement by Ducatel the question of the natural or artificial origin of the shellheaps was still under discussion.

In this connection, and with these facts before us, it is of interest to read in the unpublished records of 1840, of the Essex County Natural History Society, to which my attention was directed by the honored president of the Institute, Dr. Wheatland, the first account of the shellheap at Pine Grove, from which so many of us have ob-

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<sup>1</sup> Vanuxem and Ducatel both agreed with Conrad in stating that some beds were of natural origin, but they were true fossils.

tained scallop shells in our younger days, when the place was famous as a picnic ground, and into which some of us have dug in after years, with a full knowledge of its Indian origin.

The record of the secretary's book of the society is headed "Report on the presence of shells in great quantities near the seashore in Salem, Mass., observed May, 1840, by John Lewis Russell."

From the record it appears that Mr. Russell addressed the society on the subject of raised beaches, and he quotes from several authors accounts of elevations of land in various parts of the world in recent times, caused by earthquakes, and also mentions several instances of raised beaches on which are great masses of shells. All these deposits, following the opinions of the authors he has quoted, he regards as natural formations. He then states that there have been found "strata of *Mya*, *Mytilus*, and *Ostrea*, several inches thick, from five to ten feet below the surface at Lechmere's Point in Cambridge," and that "S. C. Dana, M. D., the ingenious and accomplished chemist of Lowell . . . found them on the site of the Court House [at East Cambridge] and has no doubt that they were raised to their present position from the adjacent beds of the harbor, of which the hill in question was probably at one time the shore of the then sea."<sup>2</sup>

After these preliminary remarks Mr. Russell comes to the special subject of the Pine Grove Shellheap, which he

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<sup>2</sup> The remains of an old shellheap were still visible at Lechmere's Point a few years since and probably can still be traced.

As an instance of finding shells at considerable depth along the old shore lines of Salem, I may mention that, when a boy, the old North River bank was graded at that part of Federal Street where now stand the houses built by Messrs. Haskell and Walden, and that in the old shore sand-bank, many shells of the large hencclam, *Macra solidissima*, were found. These were evidently shells which had been buried on the former beach of North River.

regarded as of natural origin, notwithstanding the singular association of several species of shells and bones of mammals. Had he continued to make the excavation which he mentions, to the bottom of the heap, his conclusions would probably have been entirely different. The record, however, is of interest as the first account of this now nearly effaced shellheap, and is here copied in full, as follows:—

“Having thus introduced you to these phenomena abroad, allow me to call your attention to similar in our own neighborhood and under our own eyes. Owing to the suggestion of an acquaintance I was induced to visit, in company with him, the southern shore of our harbor in that portion just east of the very picturesque group of pitch pines, contiguous to the Lead Factory of Mr. Francis Peabody. Any one who has ever rambled over the undulating hills of this spot is familiar with the indented features of the land. After passing over the crest of the hill about a fourth of a mile from where the Marblehead railroad enters the point after crossing the mouth of Forest River you descend into a valley, and at the elevation of several feet above its level, and probably more than twenty feet above high water mark, you will notice the appearance of broken shells protruding from the soil. Similar appearances exist on the shores of the Mill Pond above the Salem railroad bridge (at the foot of Circus street), but whether referable to the same agency, further examination can only determine.

“Digging into one of these spots we found an astonishing accumulation of shells in all stages of decay. Penetrating to the depth of more than four feet there seemed to be little indication that we had reached its bottom. Indeed it is not improbable from existing appearances that the bed was of indefinite extent. Specimens of

every kind of the mass were carefully saved, and are offered for the acceptance of the Society to be deposited in its cabinets.

"The greatest amount of specimens were of *Mya arenaria* or common clam. These were interspersed sparingly with *Modiola papuana*, *Mytilus edulis*, *Mactra solidissima*, *Nassa obsoleta*, *Natica heros*, *N. triseriata* and occasionally *N. duplicata*, *Fusus cinereus*, *Sanguinolaria fusca*, *Crepidula fornicata*, *Pecten concentricus*, *Ostrea* sp., upon the outside of which were minute and almost microscopic species of *Spirula*.

"You will take notice that the occurrence of the Oyster was quite rare. How this happens when its almost constant companion, *Pecten concentricus* was comparatively in abundance, I cannot explain. The oyster seems to have been an inhabitant of our northern coasts, but in sparse quantities. *Pecten concentricus* is found in company with the oyster on the southern shores as I have been informed, and indeed the exuviae of our oyster shops are sufficient proofs of the fact, among which it is often seen. *Natica duplicata* also is peculiarly of southern habit, and belongs to a group of our maritime shells, whose living habitat is not considered as belonging to the northern shores of Cape Cod.

"But the most interesting discovery remains. This was the occurrence of fragments of bones, near the bottom of the penetration which we effected. They were in a very soft and friable condition, but became more hard and firm when exposed to the air. I have succeeded by the kind assistance of my friend, Dr. Jeffries Wyman of the Boston Natural History Society, in determining these to belong to some large species of deer, and the animal as of a young age. The existence of the fourth or fifth molar of the left lower jaw most indubitably points out



this fact, the teeth of the deer possessing a peculiar process which the teeth of no other animal have. This specimen I have retained, until I hear from a friend who is familiar with the history of our native deer. From its great size I think that it may belong to the moose, being somewhat larger than any tooth of the upper jaw of the elk or wapiti now in the cabinets of the Boston Natural History Society. That collection does not possess the lower jaw of the wapiti so that the corresponding tooth could not be compared with this. The other bones, five in number, compose some portion of the lower extremities of the right and left legs. They are :—<sup>3</sup>

"1. Fragment of the lower extremity of the tibia (right leg). The epiphysis is separated from the shaft of the bone, ossification not being complete.

"2. Astragalus.

"3. Os calcis. The posterior extremity broken off.

"4. A small bone situated between the lower extremity of the tibia and the upper lateral portion of the os calcis. This was an articulation with both these bones, and is supposed by Cuvier to represent the lower head of the fibula.

"5. Fragment of the left metatarsal bone. The outer condyle broken off.

"The first four bones fit accurately together and obviously belonged to the same foot.

"The want of coössification of the epiphysis of the tibia with its shaft, would indicate that the animal had not acquired its maturity. The metatarsal bone No. 5 was obviously that of a ruminant possessing originally two

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<sup>3</sup> The paragraphs numbered 1 to 6 are given in quotations in the record and are probably a copy of Dr. Wyman's notes on the specimens which he identified for Mr. Russell.

condyles, for the articulation of two sets of phalanges of the toes. It undoubtedly belonged to the same animal with the other bones, though it formed a part of the *right* foot and the others of the left.

"6. The 4th or 5th molar of the left lower jaw.

"It remains only to add that occasional pieces of granite of the character with the super-adjacent rocks were dug up; these were very much decomposed and in some instances had actually become sand, owing to the presence of iron, and the action of water causing oxidization. At the surface, or just below it, of similar spots the shells were so decomposed as to resemble marl, and could be easily moulded by the hand. To the agriculturist these deposits may become rich means for the improvement of his soils, requiring only the labor of transportation to places where the action of carbonate of lime would be beneficial. Such has been actually the case with a similar elevation of recent marine shells in Hingham near the alms house, and these when spread over grass land, and even on old worn-out pastures have produced astonishing effects in the production of fine and healthy grass. The Hingham bed, with which I am familiar, is, however, different from ours, being completely thrown above the soil, and presenting the aspect of a vast heap of old oyster and clam shells, designedly thrown there by the hand of man. At some future opportunity I hope to be able to procure specimens from that locality to add them to the suite from the southern shore of our harbor."

## WEEDS OF ESSEX COUNTY.

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BY JOHN H. SEARS.

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A WEED is any plant which occupies cultivated ground to the injury of the particular crop intended to be grown. Thus, even the most useful plants may become weeds if they appear out of their proper place. The term is sometimes applied to any insignificant looking or unprofitable plants which grow profusely in a state of nature, as the fireweed, pigweed, mayweed, whiteweed, etc. There are weeds by the roadside, in gravel, brick and plank-walks, on railroad beds, in brooks, ponds and water courses.

By a system of natural selection some plants seem to thrive best in certain localities, as for instance the purselane. *Portulaca oleracea* is always found growing in cultivated grounds, while the common plantain (*Plantago major*) grows quite as abundantly in a hard, uncultivated situation. And again, the sorrel (*Rumex acetosella*) may be said to grow in either situation equally as well.

A large proportion of the plants called weeds are introduced from Europe, and as they are brought here with different kinds of crop seeds they become more or less adapted to the situation in which the seed is sown. And when the weed has perfected its seed, it will continue to thrive if the situation is a suitable one. Such plants as have become adapted to their surroundings usually grow in a like kind of soil and place, as there they thrive best, though a great many kinds of weeds have become so

thoroughly established that they grow equally well in a variety of situations. Plants also take a variety of forms from their situations and what they have to contend with in their season's growth.

The Roman wormwood (*Ambrosia artemisiæfolia*), found growing in cultivated ground, is usually two or three feet high, with a spread of two feet on the surface; while if grown in an old pasture where it is browsed on by cattle it will be found to take a form of one or two inches in height where it will thrive; and as the law of nature is for plants to mature seeds, one of these low, dwarfed plants will produce as many seeds as the larger plants grown in tilled ground. This often leads to the question asked by cultivators who, after ploughing and planting an old piece of pasture-land, find it thickly covered with the Roman wormwood, "Where do the seeds come from?" And as the full grown plant has not been detected by the casual observer for a series of years previous to the fields being planted, the query is made as to how long the seed has lain dormant in the soil.

Again, seeds of such plants as the Canada thistle (*Cirsium arvense*) and the fireweed (*Erechthites hieracifolia*) are furnished with a pappus of fine, soft hairs, which makes them very buoyant and easily transported by the wind to a great distance, and as such plants are very prolific, each plant producing thousands of seeds, when they do alight on cultivated or new burnt soil are immediately covered with the lighter material of which the soil is composed, and are ready to form a crop for the next season. Probably two-thirds of the seeds are dropped on grass lands and in woods where they never reach the soil, otherwise the country would soon be covered with these plants. I have arranged a classified list, with notes, of the weedy plants of Essex County, as follows :

ORDER **Ranunculaceæ.**

Virgin's Bower, *Clematis Virginiana*, is a climbing plant, growing on fences and in moist, mowing lands. It is a troublesome weed.

Tall Meadow Rue, *Thalictrum Cornuti*, is a coarse growing weed in fresh meadows.

*Ranunculus acris*, tall Crowfoot or Buttercup, is very abundant and always avoided by cattle on account of its very acrid, blistering juice. European.

*Ranunculus bulbosus* and *R. repens* are equally abundant, and have similar properties. European.

ORDER **Berberidaceæ.**

*Berberis vulgaris*, common Barberry.

This shrub was introduced from Europe, as a garden plant, for the sake of its berries. The seeds remain on the bushes all winter and supply food to the robins and other birds. They drop the seeds in fence rows and near stone walls, where they germinate and form large patches, which must be considered as weeds. They are fast covering our rocky pastures and are too abundant all over Essex County.

ORDER **Papaveraceæ.**

Celandine, *Chelidonium majus*, is quite common in old gardens and near dwellings. It was introduced from Europe.

ORDER **Fumariaceæ.**

Common Fumitory, *Fumaria officinalis*, is a weed in grain fields, and in some places a bad weed in grass lands. European.

ORDER **Cruciferæ.**

Yellow Rocket, *Barbarea vulgaris*, grows in low lands and by roadsides. It is an European plant.

Hedge Mustard, *Sisymbrium officinale*, found in waste places and near dwellings. European.

Black Mustard, *Brassica nigra*, always grows in cultivated fields. European.

Shepherd's Purse, *Capsella Bursa-pastoris*, is common in grass and tilled lands. European.

Wild Pepper-grass, *Lepidium Virginicum*, a roadside weed, native of the Southern States.

Jointed Charlock, *Raphanus Raphanistrum*, is one of the worst weeds in old farm lands, as it is very prolific in bearing seeds. European.

#### ORDER Cistaceæ.

Pinweed, *Lecheas*, of which there are three species, is a common weed in pasture lands.

#### ORDER Hypericaceæ.

St. John's-wort, *Hypericum perforatum*, abundant in old pastures and fields. European.

#### ORDER Caryophyllaceæ.

Bladder Campion, *Silene inflata*, a British species of the pink family, is spreading rapidly in many parts of Essex County. It is a deep-rooted plant. It is almost impossible to pull it up.

Common Soapwort or Bouncing Bet, *Saponaria officinalis*, escaped from gardens, is a roadside weed. European.

Corn Cockle, *Lychnis Githago*, a very pretty reddish-purple flower of the pink family, is a weed in grain fields. European.

Common Chickweed, *Stellaria media*, grows everywhere in damp grounds. European.

Mouse-ear Chickweed, *Cerastium viscosum*, a weed on lawns and in grass lands. European.

Pearlwort, *Sagina procumbens*, grows in damp places in brick walks often forcing the bricks out of place.

Sand Spurry, *Spergularia rubra*, var. *Campestris*, grows in similar situations to the last and in gravelly foot-paths.

Knawel weed, *Scleranthus annuus*, grows on railroad beds and waste places. Common. European.

Carpet weed, *Mollugo verticillata*, grows in cultivated ground, gravel walks, etc. From farther south.

#### ORDER Portulacaceæ.

Purslane, *Portulaca oleracea*. This plant is the worst weed that the agriculturist has to contend with, as it seeds very fast, and is so tenacious of life, even after it has been cut up, taking root again. Its season of growth is also during the haying time, so that it gets a good start before it is observed. It is one of the oldest European pot-herbs.

ORDER **Malvaceæ.**

Common Mallow, *Malva rotundifolia*, grows near dwellings and in garden paths. European.

Indian Mallow, *Abutilon Avicennæ*, a tall, coarse plant, escaped from gardens. From India.

ORDER **Geraniaceæ.**

Wood-Sorrel, *Oxalis stricta*, grows around dwellings and in gardens. Common.

ORDER **Anacardiaceæ.**

Poison Ivy, *Rhus Toxicodendron*, stone walls, climbing on trees, and in sandy fields.

ORDER **Leguminosæ.**

Woad Waxen, *Genista tinctoria*. This plant was introduced from Europe, prior to 1628, as a dye plant. It is fast covering the uncultivated pastures in all parts of the county. It is a native of central and southern Europe.

Zigzag Clover, *Trifolium medium*, forms dense patches in Danvers and Salem. European.

Yellow or Hop Clover, *Trifolium agrarium*, sandy fields and roadsides. European.

Black Medick, *Medicago lupulina*, abundant in grass lands. European.

Vetch, *Vicia Cracca*, a very pretty plant, but a bad weed in mowed land, as it is hard to exterminate. Abundant at Danversport.

Wild Indigo, *Baptisia tinctoria*, abundant in old pastures.

Ground Nut, *Apios tuberosa*, grows on the edges of fields, and on walls and fences, climbing on the grass.

ORDER **Rosaceæ.**

Canada Burnet, *Poterium Canadense*, a weed in fresh meadows and on river banks. Common in Danvers, Topsfield and Ipswich.

Cinque-foil, *Potentilla Norvegica*, grows in fresh meadows. It is a coarse weed.

High Blackberry, *Rubus villosus*, grows on the borders of thickets and wet meadows.

Low Blackberry, *Rubus Canadensis*, grows on rocky hills and pastures. Common.

Early Wild Rose, *Rosa blanda*, everywhere abundant in roadsides and fence rows.

Swamp Wild Rose, *Rosa Carolina*, common in wet meadows.

#### ORDER Crassulaceæ.

Garden Orpine or Aaron's-Rod, *Sedum Telephium*, one of the worst weeds in grass lands. Abundant in Danvers, Wenham and Beverly. It increases principally by tubers, though even a leaf of it will take root if covered with soil. Kerosene oil will kill it.

#### ORDER Onagraceæ.

Willow-herb, *Epilobium angustifolium*, found on new burnt land and in wet pastures, increasing rapidly by its seeds which have a tuft of long hairs at the end. The wind carries these seeds in all directions.

Common Evening Primrose, *Oenothera biennis*, a very persistent weed on roadsides, gravelly pastures and railroad beds.

#### ORDER Cucurbitaceæ.

Star Cucumber, *Sicyos angulatus*. This plant is an introduced weed from the south. It is often used to cover trellises and walls near dwellings, but is a most troublesome weed in damp soils.

#### ORDER Umbelliferæ.

Common Carrot, *Daucus Carota*, introduced into mowing lands. It seeds freely and is an unsightly weed. European.

Cow-Parsnip, *Heracleum lanatum*, is a very large, coarse plant. Found in pastures and near brooks.

Common Parsnip, *Pastinaca sativa*, common in mowed lands and increases very fast if neglected. European.

Great Angelica, *Archangelica atropurpurea*, damp fields and river banks. A coarse, strong-scented weed.

Poison Hemlock, *Conium maculatum*, a dangerous, narcotic, poisonous plant, growing by roadsides and in old gardens. This plant should be well known by all persons, as its seeds act very quickly, often producing paralysis when eaten.



ORDER **Compositæ.**

Asters and Goldenrods. These pretty plants are weeds in fence rows, on the borders of fields and in pastures. They are hard to dislodge.

Horse-weed, Butter-weed, *Erigeron Canadensis*, grows on roadsides and in fields. Very common.

Roman Wormwood, *Ambrosia artemisiæfolia*. This weed is common in all parts of the United States east of the Rocky mountains. It is a compositæ, with sterile and fertile heads, occupying different parts of the same plant.

Spiny Clotbur, *Xanthium spinosum*, waste places on the seacoast, and established as a weed in Peabody and Danvers. From tropical America.

Cone Flower, *Rudbeckia hirta*, a common weed in mowing lands. It was introduced with clover seed from the west, and is native on the prairies of Wisconsin and southward.

Tick-seed, *Coreopsis trichosperma*, and common Beggar's Tick, *Bidens frondosa*, are coarse weeds, the seeds adhering to the dress and to the fur of animals, and are thus disseminated.

May-weed, *Maruta Cotula*, roadsides and dooryards. A very common weed. European.

Yarrow, *Achillea Millefolium*, waste places and around dwellings. Common. European.

Ox-eye Daisy, *Leucanthemum vulgare*, White weed, fields and pastures. Too abundant. European. In Hanson's history of Danvers, page 47, it is said that Edward Grover planted it in his garden as an herb in 1633 at Salem Village.

Common Tansy, *Tanacetum vulgare*, escaped from old gardens. Grows in dense patches by roadsides and in fields. European.

Common Everlasting, *Gnaphalium polycephalum*, grows everywhere in pastures and old fields.

Fire-weed, *Erechtites hieracifolia*, common in recent clearings where the ground has been burnt over.

Canada Thistle, *Cirsium arvense*, a most troublesome weed in hay fields. European.

Burdock, *Lappa officinalis*, waste places and around dwellings. It is an unsightly weed. European.

Cichory, *Cichorium Intybus*, a deep-rooted weed, and one that spreads very fast. Hay fields and roadsides; too common. European.

Hawkbitt, Fall Dandelion, *Leontodon autumnale*, fields and roadsides, destroying the turf on banks and lawns. European.

Common Dandelion, *Taraxacum Dens-leonis*, grows in fields and pastures.

Blue or False Lettuce, *Mulgedium*, and Sow Thistle, *Sonchus*, are coarse weeds in cultivated swamp land.

#### ORDER Lobeliaceæ.

Indian Tobacco, *Lobelia inflata*, in mowed land it is often abundant. In hay it causes horses to slaver, and is hurtful for cows to eat.

#### ORDER Plantaginaceæ.

Common Plantain, *Plantago major*, near dwellings, yards and waste places. European.

Rib-grass English Plantain, *Plantago lanceolata*, grows in dry fields and lawns, its long thin leaves escaping the mower. European.

#### ORDER Scrophulariaceæ.

Mullein, *Verbascum Thapsus*, roadsides, pastures and old fields. European.

Toad-Flax, Butter-and-Eggs, *Linaria vulgaris*, old fields and roadsides; very troublesome in grain fields. European.

#### ORDER Labiatæ.

Motherwort, *Leonurus Cardiaea*, waste places and around dwellings. European.

#### ORDER Borraginaceæ.

Viper's Bugloss, *Echium vulgare*, roadsides and waste places in Beverly, Danvers and Middleton. It is a bad weed in cultivated fields in Virginia. European.

#### ORDER Convolvulaceæ.

Bind-weed, *Convolvulus arvensis*, abundant in Salem and vicinity, growing in dense mats and seeding rapidly. It is a perennial low climber, twining upon the grass and everything within its reach.

Hedge Bind-weed, *Calystegia sepium*, is another climbing weed, and

on tillage lands is one of the worst weeds, as it twines around young plants. It is especially abundant in Danvers, Salem and Marblehead.

Dodder, *Cuscuta Epilinum*. In Europe this plant is very injurious to the Flax. It is common in many parts of this county and is parasitic on the bark of Asters, etc.

#### ORDER Solanaceæ.

Thorn Apple, *Datura Stramonium*, waste grounds. It is a dangerous, but well known weed, its seeds being a powerful emetic. From Asia.

#### ORDER Phytolaccaceæ.

Garget or Pigeon-berry, *Phytolacca decandra*, tall and stout perennials, growing on burnt land and reclaimed swamps. The stout stalks are eaten as a substitute for asparagus in early spring.

#### ORDER Chenopodiaceæ.

The Pigweeds, *Chenopodium album*, etc., are all naturalized from Europe. The beet and spinach are in the same family.

#### ORDER Amarantaceæ.

Green Amaranths or Sugar-weed, *Amarantus*. There are three species, all natives of tropical America.

#### ORDER Polygonaceæ.

*Polygonum*, Knot-weeds, we have thirteen species growing as weeds in the county. Those commonly known are called Smart-weed, the Arrow-leaved Tear-thumb, Goose-grass, Water pepper, Lady's Thumb with a dark spot in the leaf, and are among the best known.

Curled Dock, *Rumex crispus*, fields and roadsides. Common. European.

Yellow Dock, *Rumex obtusifolius*, fields and roadsides. Common. European.

Field or Sheep Sorrel. *Rumex acetosella*, everywhere abundant.

#### ORDER Euphorbiaceæ.

Spurge, *Euphorbia maculata*, grows in open places everywhere, especially in gravel walks.

ORDER **Urticaceæ.**

Nettles, *Urtica dioica*, waste places and roadsides. European.

Rich-weed or Clear-weed, *Pilea pumila*, grows in cool, moist shady places in old gardens.

*Cannabis sativa*, Hemp, waste places, roadsides, etc. Abundant at Newburyport.

Sweet Fern, *Comptonia asplenifolia*, pastures and roadsides.

ORDER **Salicaceæ.** Willow Family.

There are several shrubby species that we may consider as weeds. *Salix livida*, quite common in dry soil in pastures and fields. *Salix humilis*, Prairie Willow, and *Salix discolor*, Pussy Willow, are abundant as roadside weeds in damp places. *Salix sericea*, Silky Willow, and *Salix lucida*, Shining Willow, are common by streams and ponds, their long roots often filling them up and choking water courses.

ORDER **Coniferæ.**

Common Juniper, *Juniperus communis*, dry, sterile hills and pastures.

ORDER **Araceæ.**

Skunk Cabbage, *Symplocarpus foetidus*, moist, springy fields and near brooks. Its coarse, fibrous roots are hard to dig up.

ORDER **Naiadaceæ.**

Pond weeds, *Potamogetons*, of which there are several species, are abundant in ponds and streams, sometimes completely filling up and changing water courses.

ORDER **Iridaceæ.**

Blue Flag, *Iris versicolor*, in wet meadows.

ORDER **Smilacææ.**

Green-brier, *Smilax rotundifolia*, grows abundantly on the borders of woods and thickets, and on account of its tough roots and formidable scattered prickles, it is hard to eradicate.

ORDER **Liliaceæ.**

American White Hellebore, Indian Poke, *Veratrum viride*, swamps and low grounds. Common.

Onion or Field Garlic, *Allium Canadense*, is a vile weed giving its alliaceous flavor to all plants grown in its vicinity. Common. European.

ORDER **Pontederiaceæ.**

Pickerel weed, *Pontederia cordata*, common in ponds, brooks and streams.

ORDER **Gramineæ.**

Cheat or Chess, *Bromus secalinus*, one of the European grasses common in rye and oat fields. There are four species, all European.

Dog-grass, *Triticum repens*, in cultivated grounds, fields, etc. Its long, underground stems cause much trouble to gardeners.

Joint-grass, *Paspalum setaceum*, common in light soils, first showing itself in August on tillage grounds. Growing in mats it is difficult to pull out of the soil, as it breaks easily at the joints.

Panic-grass, *Panicum sanguinale*, has habits like the last, and is abundant in all cultivated and waste ground. European.

Old Witch-grass, *Panicum capillare*, common in sandy, cultivated fields.

Barnyard-grass, *Panicum Crus-galli*, is a native of the south of Europe, and one of the principal forage plants in Italy. With us it is a troublesome weed.

Foxtail-grass, *Setaria*. Three species exist here. Very common near dwellings and in cultivated fields. They are usually very weedy grasses, resembling the Millet, which is another species rarely spontaneous.

Beard-grass, *Andropogon furcatus*, and *scoparius*. These two grasses are abundant in dry, sterile grounds and roadsides.

ORDER **Equisetaceæ.**

Horsetail, *Equisetum arvense*, is common in moist, gravelly soil and on railroad beds where it is a troublesome weed. *Equisetum sylvati-*

## 104 WEEDS OF ESSEX COUNTY; BY JOHN H. SEARS.

*cum* grows abundantly in wet meadows, and *Equisetum hyemale* the Scouring Rush, on river banks and near brooks. They are all weeds on reclaimed meadow-land. When cut and dried with hay, cows eat them with a greedy relish.

### ORDER Filices.

Ferns. There are several species which are considered as weeds: *Osmunda regalis*, *Osmunda Claytoniana*, *Osmunda cinnamomea*, *Pteris aquilina* and several species of *Aspidium* are all called Buckhorn, Brake, etc. They are all noxious weeds, being poisonous to young horses when mixed with hay, and they are not relished by other cattle, though goats will thrive on them better than on English hay.

### ORDER Musci.

The Mosses are small plants not distinguishable except by the botanist. The Hair Cap Moss, *Polytrichum commune*, in dry, sterile pastures, covers many acres, forcing the grass out entirely and leaving a complete carpet of the moss. Some species of *Hypnum* will persist and make a rapid growth even in cultivated fields; others are parasitic on the bark of trees and are injurious to orchards as hiding places for insects.

### ORDER Lichens.

Lichens are parasitic on dead wood and decayed vegetable matter. The Reindeer Moss, *Cladonia rangiferina*, completely covers some sections of our old pasture-land in Danvers and Wenham, making them entirely destitute of other vegetable growths and worthless as grazing land. Other lichens on trees in the orchard and in the woods form hiding-places for insects, where they deposit their eggs.

## FIELD MEETING AT OAK DELL, GEORGETOWN.

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THE first field meeting of the season was held at Oak Dell, on Tuesday, June 13, 1883. It is a picturesque spot in South Georgetown, as its name signifies, an oak grove. A beautiful pond is within easy walking distance, and the surface is pleasantly diversified. The proprietors have taken advantage of the natural attractions of the place in order to adapt it to picnics and other gatherings.

A raised platform for speakers and seats for an assembly of two hundred are placed under the oaks, and near by, a cook-house and tables for refreshments. The party from Salem and vicinity went in barges and carriages, and were joined at the grounds by others from Danvers, West Newbury, Boxford, Georgetown and Groveland. Exploring parties were at once formed, the botanical work alone promising good results. Mrs. Charlotte N. S. Horner chiefly conducted this part of the work; others visited the lake and other points of interest. At 2 o'clock P. M., the meeting was held in the grove, President Wheatland presiding, who prefaced the exercises with remarks on the utility of field meetings and the pleasant auspices under which this one was held. Mrs. Horner was introduced as one highly conversant with natural history, and who has devoted herself to the study of the flora of Essex County, especially of her own district, Georgetown and vicinity.

She exhibited and described a number of plants collected in the forenoon's ramble, indigenous to the locality. She considered this a rare field for botanical study, and stated that more species of plants can be found in it than in any other district of equal extent in the county.

A list of the more important and interesting plants of the higher orders found by her in Georgetown has been prepared by Mrs. Horner, and will be found appended to this report.

Rev. WILLIAM P. ALCOTT, of Boxford, being called upon, spoke of the lichens as worthy of study both for their beauty, botanical interest, and the part they play in the economy of the vegetable world. He also spoke of the study of mineralogy, and exhibited some specimens of rocks and minerals which he had brought from Egypt.

Rev. BENJ. F. McDANIEL, of Salem, took up the subject left by Mr. Alcott, and gave a brief outline of the region, regretting that the rock exposures in the vicinity were so few and uniform in character as to leave little for him to say. He urged the importance of the study of geology, even in such an unpromising field, and asked for the coöperation of local students in bringing the hidden things to light.

In answers to questions, he gave a brief account of the formation of peat bogs and their transformation, through several stages, into coal.

Messrs. Sidney Perley, of Boxford, and Henry M. Nelson, of Georgetown, spoke on historical matters relating to the town, Mr. Nelson stating that Oak Dell was a part of a large tract of land, an original grant to his ancestors.

Messrs. Andrew Nichols, of Danvers, M. W. Bartlett, of West Newbury, and Dr. B. F. Stevens, of the Boxford Natural History Society, made brief remarks.

After the usual votes of thanks to Miss Nelson and the Messrs. Nelson for the use of the grounds and other courtesies received, and to Messrs. Elliot, Perley, Mrs. Horner and others who contributed to the success of the meeting, the parties separated for their journeys homeward.



## NOTES ON THE FLORA OF SOUTH GEORGETOWN.

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 BY MRS. CHARLOTTE N. S. HORNER.
 

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Following is a list of plants that are found on the shores and in the meadows and pastures bordering on Lake Raynor, South Georgetown, and a short distance beyond the Boxford line; but all within a half mile of the lake.

Many of the plants enumerated in this list are very common everywhere, and others are more or less frequently found in other localities; but some are found here that are rare elsewhere in the county. These are printed in italics, and their home is the small district described above. There is a small locality at the base and on the sides of some precipitous hills where are found an unusual number of rare plants. The most noteworthy of these are marked in the list with an asterisk(\*). In this district are many pond weeds, grasses, sedges, mosses and lichens not found elsewhere in the town; but these are not enumerated in the list.

*Clematis Virginiana.*

*Anemone* “

“ *nemorosa.*

*Hepatica triloba.*

*Thalictrum anemonoides.*

“ *dioicum.*

“ *cornuti.*

*Ranunculus abortivus.*

“ *recurvatus.*

“ *bulbosus.*

“ *acris.*

*Caltha palustris.*

*Coptis trifolia.*

*Aquilegia Canadensis.*

*Actæa rubra.*

“ *alba.*

*Berberis vulgaris.*

*Caulophyllum thalictroides.\**

*Nymphæa odorata.*

*Nuphar advena.*

*Sarracenia purpurea.*

*Sanguinaria Canadensis.*

*Cardamine hirsuta.*

*Viola lanceolata.*

“ *blanda.*

“ *cucullata.*

“ “ *var. cordata.*

“ *pubescens.*

*Helianthemum Canadense.*

*Lechea major.*

“ *minor.*

*Hypericum Canadense.*

“ *perforatum.*

“ *Sarothra.*

- Geranium maculatum.  
 Impatiens fulva.  
 Oxalis stricta.  
 Rhus glabra.  
     " copallina.  
     " venenata.  
     " Toxicodendron.  
 Vitis labrusca.  
 Ampelopsis quinquefolia.  
 Celastrus scandens.  
 Acer saccharinum.  
 Polygala sanguinea.  
     " polygama.  
 Desmodium nudiflorum.  
 Amphicarpæa monoica.  
 Lespedeza hirta.  
     " capitata.  
 Apios tuberosa.  
 Baptisia tinctoria.  
 Prunus maritima.  
     " serotina.  
 Spiræa salicifolia.  
     " tomentosa.  
 Agrimonia Eupatoria.  
 Potentilla Canadensis.  
 Fragaria Virginiana.  
 Rubus odoratus.\*  
     " strigosus.  
     " occidentalis.  
     " villosus.  
     " Canadensis.  
 Rosa lucida.  
     " rubiginosa.  
 Pyrus arbutifolia.  
 Saxifraga Virginiensis.  
 Sedum Telephium.  
 Hamamelis Virginiana.  
 Circæa Lutetiana.  
 Epilobium angustifolium.  
     " coloratum.  
 Oenothera biennis.  
     " pumila.  
 Hydrocotyle Americana.  
 Cicutu maculata.  
 Aralia racemosa.\*
- Aralia nudicaulis.  
 Cornus Canadensis.  
     " sericea.  
     " paniculata.  
 Triosteum perfoliatum.  
 Sambucus Canadensis.  
 Viburnum Lentago.  
     " acerifolium.  
 Mitchellia repens.  
 Houstonia cærulea.  
     " purpurea, probably  
     introduced with grass seed.  
 Galium asprellum.  
 Cephalanthus occidentalis.  
 Liatris scariosa.  
 Eupatorium purpureum.  
     " perfoliatum.  
     " ageratoides.\*  
 Sericocarpus conyzoides.\*  
 Aster corymbosus.  
     " patens.  
     " lævis.  
     " undulatus.  
     " multiflorus.  
     " dumosus.  
     " Tradescanti.  
     " acuminatus.  
 Diplopappus linarifolius.  
     " umbellatus.  
 Solidago bicolor.  
     " latifolia.\*  
     " cæsia.  
     " neglecta.  
     " nemoralis.  
     " Canadensis.  
     " lanceolata.  
 Inula Helenium.  
 Rudbeckia hirta.  
 Helianthus divaricatus.  
 Bidens frondosa.  
 Maruta cotula.  
 Achillea millefolium.  
 Leucanthemum vulgare.  
 Gnaphalium polycephalum.  
     " uliginosum.

*Antennaria margaritacea.*  
 " *plantaginifolia.*  
*Erechthites hieracifolia.*  
*Senecio aureus.*  
 " " *var. obovatus.*  
*Cirsium lanceolatum.*  
 " *pumilum.*  
*Krigia Virginica.*  
*Leontodon Autumnale.*  
*Hieraceum scabrum.*  
 " *venosum.*  
*Nabalus albus.*  
*Taraxacum Dens-leonis.*  
*Lobelia cardinalis*, spike of 2  
 feet.  
*Lobelia inflata.*  
*Gaylussacia resinosa.*  
*Vaccinium macrocarpon.*  
 " *Pennsylvanicum.*  
*Cassandra calyculata.*  
*Andromeda ligustrina.*  
*Kalmia augustifolia.*  
*Rhodosia Canadensis.*  
*Azalea viscosa.*  
*Pyrola rotundifolia.*  
 " *elliptica.*  
 " *chlorantha.*  
 " *secunda.*  
*Moneses uniflora.*  
*Chimaphila umbellata.*  
 " *maculata.*  
*Monotropa uniflora.*  
 " *Hypopitys.\**  
*Ilex verticillata.*  
*Trientalis Americana.*  
*Lysimachia thyrsiflora.*  
 " *lanceolata.*  
 " *stricta.*  
 " *quadrifolia.*  
*Utricularia cornuta.*  
*Epiphegus Virginiana.\**  
*Verbascum Thapsus.*  
*Linaria Canadensis.*  
 " *vulgaris.*

*Chelone glabra.*  
*Mimulus ringens.*  
*Gratiola aurea.*  
*Gerardia purpurea.*  
 " *flava.*  
*Castilleja coccinea.*  
*Melampyrum Americanum.*  
*Verbena hastata.*  
 " *urticifolia.*  
*Phryma leptostachya.*  
*Mentha viridis.*  
 " *Canadensis.*  
*Lycopus Europæus.*  
*Pycnanthemum muticum.*  
 " *lanceolatum.*  
*Hedeoma pulegioides.*  
*Brunella vulgaris.*  
*Leonurus cardiaca.*  
*Scutellaria galericulata.*  
 " *lateriflora.*  
*Echium vulgare.* Two or three  
 plants in a hayfield not per-  
 manent.  
*Myosotis verna.*  
*Convolvulus arvensis.*  
*Cuscuta Gronovii.*  
*Solanum Dulcamara.*  
*Gentiana crinita*, plant 2 feet  
 with 45 blossoms and buds.  
*Gentiana Andrewsii.*  
*Menyanthes trifoliata.*  
*Apocynum androsæmifolium.*  
*Asclepias Cornuti.*  
 " *purpurascens.*  
 " *incarnata.*  
*Phytolacca decandra.*  
*Sassafras officinale.*  
*Lindera Benzoin.*  
*Comandra umbellata.*  
*Euphorbia maculata.*  
*Ulmus fulva.\**  
 " *Americana.*  
*Platanus occidentalis.*  
*Juglans cinerea.*

# 110 FIELD MEETING AT OAK DELL, GEORGETOWN.

*Carya alba.*  
 " *porcina.*  
*Quercus alba.*  
*Fagus ferruginea.*  
*Corylus Americana.*  
*Ostrya Virginica.*  
*Myrica Gale.*  
 " *cerifera.*  
*Comptonia asplenifolia.*  
*Betula lutea.*  
 " *alba var. populifolia.*  
 " *papyracea.*  
*Alnus serrulata.*  
*Salix alba.*  
*Populus tremuloides.*  
*Pinus rigida.*  
 " *Strobus.*  
*Abies Canadensis.*  
*Juniperus communis.*  
*Arisæma triphyllum.*  
*Peltandra Virginica.*  
*Typha latifolia.*  
*Sparganium eurycarpum.*  
*Alisma ptantago.*  
*Habenaria lacera.*  
 " *psycodes.*  
 " *fimbriata.*  
*Goodyera repens.\**  
 " *pubescens.*  
*Spiranthes cernua.*  
 " *gracilis.*  
*Arethusa bulbosa.*  
*Pogonia ophioglossoides, a*  
*white variety.*  
*Calopogon pulchellus.*  
*Corallorhiza multiflora.\**  
*Cypripedium acaule.*  
*Hypoxis erecta.*  
*Iris versicolor.*  
*Sisyrinchium Bermudiana.*  
*Smilax rotundifolia.*  
 " *herbacea.*  
*Trillium cernuum.\**  
*Medeola Virginica.*

*Smilacina racemosa.*  
 " *bifolia.*  
*Polygonatum biflorum.*  
*Lilium Philadelphicum.*  
 " *Canadense.*  
*Pontederia cordata.*  
*Filices.*  
*Polypodium vulgare.*  
*Adiantum pedatum.\**  
*Pteris aquilina.*  
*Asplenium Trichomanes.\**  
 " *ebeneum.*  
 " *Filix-fœmina.*  
*Phegopteris hexagonoptera.*  
*Aspidium Thelypteris.*  
 " *Noveboracense.*  
 " *spinulosum.\**  
 " *cristatum.*  
 " *marginale.\**  
 " *acrosticoides.\**  
 " *var., in-*  
*cisum.\**  
*Cystopteris fragilis.\**  
*Struthiopteris Germanica.\**  
*Onoclea sensibilis.*  
*Woodsia obtusa.*  
*Dicksonia punctilobula.*  
*Osmunda regalis.*  
 " *Claytoniana.*  
 " *cinnamomea.*  
*Botrychium Virginianum.\**  
 " *ternatum, var. aus-*  
*trale? fine specimens.*  
*Botrychium ternatum var. ob-*  
*liquum.*  
*Botrychium ternatum var. dis-*  
*sectum.*  
*Equisetum arvense.*  
*Lycopodium lucidulum.*  
 " *dendroideum.\**  
 " *clavatum.*  
 " *complanatum.*  
*Selaginella rupestris.\**  
 " *apus.*

# BULLETIN

OF THE

## ESSEX INSTITUTE.

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### FIELD DAY AT DODGE'S MILL, ROWLEY, FRIDAY, JUNE 29, 1883.

THE party from Salem went to Ipswich in the morning express train, and by carriages to the place of meeting, some five or six miles distant. At Ipswich, a passing call was made at the Manning High School, where there is a fine mineralogical collection, also specimens representing other departments of natural history. The mill is about three miles from Rowley village in the direction of Georgetown and near to the limits of Byfield. It is upon the Dummer stream or brook, and it is owned by Mr. Ignatius Dodge; in whose immediate family it has been since 1772, and perhaps from an earlier date.

Members and friends assembled soon from Georgetown, Boxford, Ipswich, Rowley and Groveland. Tables were prepared on a sequestered little island formed by the running brook. Some of the party under the guidance of Mr. Sears went on a botanizing excursion in the neighborhood; others drove a couple of miles to a hill on which there are vestiges of supposed Indian earthworks.

This hill, known as Hobson's Hill, is owned by Joshua N. Foss. It stands out alone and commands a good view

of the surrounding country to points from three to ten miles distant. The hill lies in part within the precincts of the Byfield parish, which is bounded by the Dummer stream. The principal object in visiting the summit of the hill was to examine a long but very low embankment and ditch extending nearly in a straight line over the hill to the low land. Mr. Foss discovered this line and supposed it to be Indian work, partly, perhaps, because of evidence that the place was a resort of the Indians many years ago.

Mr. Putnam said that the work bore some resemblance to an Indian trail, but its abrupt termination was not favorable to that theory, and he thought a careful examination of the place was required before an expression of opinion would be of any importance.

After the noon repast, the company repaired to the saw mill where comfortable seats were improvised for the accommodation of those attending the afternoon session.

President WHEATLAND introduced the exercises with a few observations relating to the various circumstances under which the field meetings are held.

Mr. JOHN H. SEARS exhibited and remarked upon specimens of the following plants which had been collected during the day :

- Actæa spicata*, var. *rubra* (Red Bane Berry).
- Thalictrum cornuti* (Tall Meadow Rue).
- Magnolia glauca* (Small Magnolia).
- Nuphar advena* (Cow Lily).
- Corydalis glauca*.
- Sarracenia purpurea* (Pitcher Plant).
- Fragaria virginiana* (Strawberry).
- Rosa lucida* (Wild Rose).
- Cornus sericea* (Round-leaved Cornell).

*Cornus alternifolia*.  
*Cornus circinata*.  
*Nyssa multiflora* (Tupelo or Sugar Gum Tree).  
*Rudbeckia hirta* (Cone Flower).  
*Leucanthemum vulgare* (White Weed).  
*Specularia perfoliata* (Venus' Looking Glass).  
*Vaccinium macrocarpon* (Cranberry).  
*Kalmia latifolia* (Large Laurel).  
*Kalmia angustifolia* (Sheep Laurel).  
*Rhododendron rhodora* (Rhodora).  
*Pyrola chlorantha* (Winter Green).  
*Pyrola rotundifolia* (Winter Green).  
*Chimaphila umbellata* (Prince's Pine).  
*Linaria canadensis* (Toad Flax).  
*Brunella vulgaris* (Self-heal).  
*Cynoglossum officinale* (Hound's Tongue).  
*Calystegia sepium* (Hedge Bind Weed).  
*Apocynum androsæmifolium* (Dogbane).  
*Ostrya virginica* (Hop Horn-beam).  
*Peltandra virginica* (Arrow Arum).  
*Habenaria virescens* (Orchis).  
*Habenaria fimbriata* (Great Purple Orchis).  
*Pogonia ophioglossoides* (Pogonia).  
*Hypoxis erecta* (Star Grass).  
*Sisyrinchium bermudiana* (Blue-eyed Grass).  
*Allium canadense* (Field Garlic).

Vice President F. W. PUTNAM was introduced and made some very interesting remarks on archæological subjects. These have been arranged in an illustrated paper and will be inserted at the close of this volume.

The President then introduced Mr. John Robinson with a reference to the Museum at Salem, in which collections have been going on for eighty-four years.

MR. ROBINSON spoke of the earlier collection of specimens from the South Sea Islands and the East Indies by the East India Marine Society, and those of later date,

chiefly zoölogical specimens, by the Essex Institute, all of which are now permanently deposited with the trustees of the Peabody Academy of Science and are arranged in the cabinets in the East India Marine Hall, Salem, where they are on free exhibition every day to the public.

The Academy has lately given especial attention to perfecting the collections representing the geology, botany, zoölogy and prehistoric relics of Essex County and nearly every species of the flora and fauna of this region may now be seen there, also specimens of its mineralogy and geology. The collection of prehistoric or "Indian relics" is also very large and displayed in the best manner.

This Museum is county property and the people of the county should realize their rights and privileges in this ownership. To make this museum as perfect as it is desired it should be, the coöperation of our citizens is earnestly solicited by the trustees in charge. It is their wish to do all in their power for the instruction of visitors to the collections, and they have the means and facilities to care for all accessions which are made.

Mr. ALFRED OSGOOD, of Newburyport, made some general remarks upon the different forms of arrowpoints, and expressed some theories of his own upon the origin and use of the several forms.

Hon. N. A. HORTON, of Salem, was the last speaker, and, in closing, offered the following vote which was unanimously adopted.

*Voted.* That the thanks of the Essex Institute are tendered to Messrs. Ignatius G. Dodge, Phineas Dodge, Harrison Nelson, W. Walker, Mrs. Hubbard, and others of the vicinity for the many kind attentions of the day, also for abundant refreshment at the noon lunch. Adjourned.



## A DAY AT LINEBROOK, THURSDAY, JULY 26, 1883.

THIS is a rural country village situated in the western part of the township of Ipswich, and is about the same distance from the principal settlement as from Boxford and Topsfield; some of the people receive their mail matter in the latter town.

The party from Salem went in carriages; delegations from towns in the vicinity were also present. Soon after the arrival, a large number joined the botanical ramble under the guidance of Mr. John H. Sears; others went at will over the hills and valleys to see places of interest in this pleasant locality.

The noon-day repast was partaken of in a beautiful grove not far from the village church, which at 2.30 P. M. was well filled with an attentive audience; the President opened the meeting with some preliminary remarks on the general subject of field meetings, and said that the three meetings held this season were in places which the Institute had visited for the first time, an unusual experience in its history.

Mr. JOHN H. SEARS, of Salem, described the flora of the neighborhood, which, he said, is so varied, that a large portion of the plants indigenous to the county can be found here. He exhibited quite a long list of those that had been collected during the day.

Mr. M. V. B. PERLEY, of Linebrook Parish, read a communication which he had prepared, giving some interesting facts concerning the parish which is an old settlement, dating back to about 1636, an abstract of which is herewith appended.

Rev. B. F. McDANIEL, of Salem, made an humorous reference to his attempt to reach "Pulpit Rock," which he presumed, from a specimen taken from it, was a kind of porphyry common to the neighborhood. He said there was much to be seen and investigated, in a geological point of view in the stone walls hereabouts, and gave advice in the direction of encouraging geological and mineralogical investigation. He suggested that specimens of the various rocks in the town be collected and sent to the Museum of the Peabody Academy of Science in Salem, and he promised to do his part in arranging the same.

Mr. SIDNEY PERLEY, of Boxford, was the next speaker, He made a lengthy presentation of the state of society that preceded the Revolutionary period, especially referring to the houses, domestic appliances, food, dress, education, etc.

Hon. J. J. H. GREGORY, of Marblehead, made some practical suggestions about our common weeds. He said that some botanist should make a specialty of weeds common to our pastures and fields, and give the benefit of his observations to the farmers and people of the county.

Mr. A. C. PERKINS, formerly of the Phillips Academy, Exeter, spoke of the importance of habits of observation among the young, and how satisfactory it is to know a plant or flower when seen. He told the story of the country storekeeper, who placed on his counter a nicely arranged bunch of the blossoms of the common potato plant, and then as the farmers, his customers, generally came to his store, he asked them if they could tell him what the flower was? Of course, all of them had seen the potato blossom year after year, but no one recognized it and wondered what the beautiful specimens were.

Mr. Perkins said that such meetings were of great

value to the people, and he invited the persons present to examine their closets and garrets, and send printed or written historical or genealogical matter to the Institute for preservation, mentioning instances of papers, thus found, that were of great value and importance to the student in history.

Hon. N. A. HORTON, of Salem, said a few words respecting the parish of Linebrook and its connection with the witchcraft troubles in 1692.

The SECRETARY offered a vote of thanks to the people of Linebrook for their kind attentions, and also for the use of the church for the purposes of the meeting. After an unanimous adoption, the meeting adjourned.

The people of Linebrook seemed to have taken a great interest in this meeting; men, women and children turned out *en masse* during the day, while at the afternoon meeting there was a large attendance. It was the generally expressed opinion that the gathering was one of more than ordinary interest and enjoyment.

## A PEN-RAMBLE IN LINEBROOK.

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BY M. V. B. PERLEY.

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THIS is ancient territory. There were vested rights, upon the southeast, as early as 1635 or 6. Before 1653 Ipswich-Linebrook was all improved. The earliest owners were Batchelder, Winthrop, Norton, Foster, Payne, Jacobs, etc. The earliest settlers were Batchelder, Foster, Sherwin, Howe, Perley, Fowler, Davis, Grant, Burnham, Cooper, Burpee, Tenney, Pingree, Kimball, Chapman, Dodge, Jewett, Dresser, etc.

The earliest settlements were upon the south and north where the rivers led. It has always been a farming community. The surface is agreeably diversified with hills, plains and meadows. Hunsley hill upon the northeast, 300 feet above the level of the sea, is the highest elevation in the county, except Baldpate in Georgetown, 392 feet, and Holts hill in Andover, 423 feet. Upon Hunsley's summit, a tree, which was used by the United States government as a beacon for many years, was destroyed by the wind some ten years ago. The plain land is somewhat sandy and not now particularly adapted to farming. When the soil was new it was very satisfactory for raising the cereals, and our early ancestors sought and valued it for corn, wheat, flax and others. The valleys are rich and fertile. The meadows were highly prized by the settlers, for they were the principal source of feed for their cattle in winter. One hundred and twenty-five years ago Mr. Job Pingry owned three thousand acres of this territory.

Within our southwestern border is Hood Lake, fifty acres of beautiful water, lately stocked with choice fishes.

Near the site of the ancient church is "pulpit rock," having a perpendicular frontage of some ten feet, overlooking a broad plain, where Rev. George Whitefield electrified the multitude with the spirit of his power, as he reasoned of righteousness, temperance, and a judgment to come. Near the present church is one of the largest barns in the county, 120 by 41 feet, with excellent equipments. Opposite this barn is the site of the old garrison and tavern, where at a militia election the successful candidate was accidentally shot by his opponent, who was tried and convicted, but pardoned by the Governor before sentence was pronounced; and where upon an election day a Mr. J. P. climbed the flag-staff, unaided, to the top of the mainstaff, for the reward of a bowl of punch that had been placed there by means of ladders. Having reached the top and secured the prize, he offered to share it with any who might earn it as he had. Several attempts with as many failures made him

Monarch of all he surveyed  
With rights that none could dispute.

Early in the present century there was the very eccentric sign of a very eccentric man. It has found its way into literature, and has been told as an entertaining story by travellers far and wide. His title was corporal, his trade blacksmith, his business landlord, and his sign :

"I shoe the horse, I shoe the ox;  
I carry the nails in my box;  
I make the nail, I set the shoe,  
And entertain some strangers too."

At times he would not reply when questioned unless addressed by his title. He was as obliging and generous as he was eccentric.

During the Revolution, report said one day that the enemy was sailing up Batchelder's brook, and men, wo-

men and children fled for their lives. But one Dresser, whom they met, called them fools and deliberately taking out his pipe and lighting it, said, "I'll take a little smoke before they get here." They did not come, but we are not to infer that he is smoking now.

One of our most substantial, practical, influential and valuable citizens, in general business and town affairs, was Phineas Nelson Dodge, for many years selectman and assessor, and several times elected special supervisor and commissioner in valuations and expenditures of large sums of money.

Rev. Samuel Perley was born here—a graduate of Harvard College, an able preacher, and a member of the convention that ratified the Federal Constitution, and voted for its adoption. Here, too, was born Rev. Nathaniel Howe, uncle of our present pastor, a graduate of Harvard College, a preacher of Hopkinton, and noted for his originality, incisive diction and hard logic. Linebrook fought in the Indian wars, in the Revolution, in the war of 1812, and furnished some fifteen or twenty soldiers against the Rebellion.

But what of the parish as such? Of what use is it when churches and ministers are not particularly necessary to lead the great majority in the contemplation of truth; when saving truth is uttered only by the most popular preachers; when converts can be made on a Sunday pleasure-ride, as in a prayer-room; when seashores and groves are as hallowed, as the place where prayer is wont to be made? Of what use when men, *therefore*, are under no especial obligation to support it, except as a matter of charity to the church; and tire so much during the week in the service of the world, that they feel too tired to serve God on Sunday? There is little use of it, and there is a corresponding ignorance of its function. But there

was a time when the parish had its use ; when every man understood and obeyed its precept or felt its rod of correction ; when the parish was a power for good in social life and moral conduct, to say nothing now of the exemplary piety fostered by that old regime. There was a time when a man should labor six days and rest on the seventh ; when he must belong to some parish, must contribute proportionally of his substance for the gospel support, must be in his place of worship, with his family, on Sunday, or give a good and substantial reason for his neglect, and so bring up his children in rectitude. The parish was not a regime of compulsion more than any rule of right conduct of to-day. Worship is naturally inherent and is the foundation of religious life, and no well-ordered life exists without a time and place for everything. So every community for religious worship and instruction must have its metes and bounds, its corps of officers, its laws and by-laws and means of support.

Parishes grew up then as towns do now. New corporations in either case remove existing burdens and open new facilities for progress and prosperity. The inhabitants of this precinct were burdened in being so far remote from their respective places of worship. Boxford first parish, and Rowley second, were upon the west, Byfield upon the north, Rowley and Ipswich first parishes upon the east, and Topsfield parish upon the south. Central Linebrook is some four miles from either. Besides, many living within that distance would be better accommodated here ; and with ample territory and consequently ample means, it was thought advisable to employ a religious teacher as early as 1739 or 40. Shortly afterwards the propriety of a corporate parish began to be discussed, and a petition was sent to the Great and General Court of Massachusetts Bay. Finally, a committee of that body

"repaired to the several parishes, took a view of the situation and circumstances and heard the parishes concerned," and submitted their report March 21, 1745, old style. "In Council June 4, 1746, it was ordered that the inhabitants and their effects by the report set off together with such other persons exempted as may join them within twelve months, be and are hereby erected into a distinct and separate precinct accordingly, and that they do duty and receive privileges as other precincts within the Province do or by law ought to enjoy, and that the charge of the committee amounting to 9£. 9s. 6p. be paid by the petitioners."

"Sent down for concurrence.

"J. Willard, Sec'y.

"Received and concurred in.

"J. Hutchinson, Speaker.

"Consented to.

"W. Shirley.

"Copy examined,

Pr Josiah Willard, Sec'y."

The warrant for the first meeting was issued by "the worshipful Jonathan Wade, one of his Majesty's Justices of the Peace for the county of Essex." It was directed to Abraham How, and he was requested "to notify and warn the freeholders and other inhabitants of the precinct qualified to vote in town affairs to assemble and meet at the meeting-house in said parish, on Monday, the 7<sup>th</sup> day of July next, at one of the clock afternoon." It was dated and signed: "Given under my hand and seal this twelfth day of June in the twentieth year of his Majesty's reign annoq: Domini 1746. Jonathan Wade Just<sup>c</sup> Pacis."

Mr. How made return of the warrant, and the first parish meeting was held according to its precept. George



Hibbert was chosen moderator; Mark How, clerk; and John Smith, Daniel Foster, George Hibbert, Jonathan Burpee and John Fowler, jr., a committee for calling future meetings. Thus the parish obtained its status, its right to command its parishioners and to tax their property.

The perimeter of the parish is in part composed of five different brooks, and it was, therefore, determined by vote Jan. 27, 1746-7, to name it Linebrook. Dec. 25, 1755, Dea. Jonathan Burpee, Sen. David Perley and Mark How were chosen a committee to join with the neighboring parishes in perambulating the line, which was described in the petition to the Great and General Court, and recorded in the parish records March 17, 1752, as follows :

In Ipswich, beginning at the mouth of Howlett's brook, so called, by the north side of Ipswich river; thence running northeasterly by said river till it comes to Gravelly brook, so called; thence running northerly by said brook across the West Meadows till it comes to John Smith's, to the west branch of Egypt river, so called, and by said river till it comes to the northeasterly corner of Bullbrook pasture so called; thence northwesterly including said pasture till it comes to where said pasture strikes Rowley line; thence westerly on Rowley line till it comes to Batchelder's brook, so called; thence northerly by said brook, including George Kilburn's and Thomas Wood's land on the east side of said brook, following the said brook till it comes to the easterly part of George Hibbert's land; then, as said Hibbert's land runs to the northwest corner thereof, including said Hibbert's land; thence running northwesterly as the line runs between Jonathan Burpee's and Aquilla Jewett's land to the brook, on which stands Mr. Tenney's grist-mill; so by the brook

to the said mill; thence by said brook till it comes to Straight bridge; still southwesterly on said brook including Aaron and Job Pingree's and Jedediah and David Kilburn's and David Perley's land on the north of said brook to an island in the Great Meadows, called Peabody's Island, to Boxford line; thence southerly as Boxford and Rowley line runs till it comes to the Ipswich line; thence as the line runs between Boxford and Ipswich, till it comes to the corner bounds between Ipswich, Boxford and Topsfield before Capt. Perley's door; thence as the line runs between Topsfield and Ipswich, till it comes to the first mentioned bounds at Howlett's brook.

Feb. 11, 1774, a part of the parish with the same part of the town of Ipswich was by the General Court set off to Topsfield. June 28, 1786, a law was passed wherein the bounds of parishes formerly settled were "confirmed and established." After the amendment to the State Constitution a law was made whereby all memberships of parishes must be preceded by an application in writing. In 1846, a part of Ipswich was set off to Boxford, but no mention was made of the parish, which was, therefore, uneffected. No other changes have come to our notice and the Linebrook of to-day includes parts of Rowley, Ipswich and Boxford — the original line except in the set-off to Topsfield. A parishioner, at first, as determined by Worshipful Wade's warrant for the first meeting, was an inhabitant of the precinct, qualified by law to vote in town affairs. By the law of June 28, 1786, a parishioner must pay, over and above his poll-tax, a tax equal to two-thirds of a single poll-tax. We know of no other restriction and no change in these. The Public Statutes of 1882 say: "Nothing in this chapter shall enlarge or diminish the powers of taxation enjoyed by

any religious society by virtue of any special law or act of incorporation, nor impair the existing right of property of any territorial parish." Thus Linebrook exists to-day, if these laws have been complied with,—exists at the age of one hundred and thirty-seven years, strong in her original powers and privileges, and only subject to the duties and liabilities of her youth.

The first meeting-house was erected in 1743. June 27, 1746–7, the parish voted to finish the house thus: First, the pulpit and deacon's seat; second, the body seats below; third, three fore seats in each gallery; fourth, the gallery stairs and plaster under the gallery; fifth, a pew for the parish. May 18, 1747, it was voted that the meeting-house be finished by the last of October. It was a two-story, square house, was furnished with box-pews, and was entered by a front door and a door on each side. Dec. 28, 1747, a committee was chosen to receive and receipt for a gift from Abraham Smith, and discharge the executor. They were also to paint the pulpit suitably and put on it the name of *Abraham Smith deceased*. This house stood about a third of the way on the road from the Ipswich-Linebrook school-house to the Rowley-Georgetown road. The building committee were John Smith, Thomas Potter, Mark How, Jonathan Burpee and John Abbott. The genealogy of the Fowler family reads that James Davis, who married Abigail Metcalfe, gave the land on which the house stood. The parish records read that the price of pew No. 11, bought by Joseph Metcalfe and Jonathan Burpee, was "3½ acres of land to build the house on." The house was removed to the location of the present church and rebuilt in 1828 and dedicated Jan. 1, 1829. The rebuilding followed the old model. The present church was erected in 1848.

Their method of psalm singing was quaint. The tuner,

as the leader was called, would read a verse or line and then strike some symmetrical movement, when all the organs vocal followed. In 1791, the singing-school was invited to assist the tuners, and their office began to decline.

No Ruling Elder was chosen after 1787. The deacons number twelve. Dea. William F. Conant, the present incumbent, has worthily and efficiently performed the duties of his office for fifty-two years. He has also been superintendent of the Sunday School, at intervals, about forty years. The school was established about 1818. No records of its progress or doings have been kept or are now. It is doing a good work, and has a membership of about fifty.

The church has had five settled pastors. Rev. George Leslie was the first. He was a native of Scotland, a graduate of Harvard College, a divinity student of Rev. John Emerson of Topsfield, was ordained here when the church was organized, married Deacon Burpee's youngest daughter, had eight children (six sons), removed to Washington, N. H., where he was installed in 1780, where he was offered and declined a professorship in Dartmouth College, and where his family sleep, save one son. He was an eminent scholar, intellectually powerful, and a pious and successful minister. Rev. Gilbert T. Williams succeeded. He was a native of New Jersey, a graduate of Dartmouth College, lived in the house Mr. Leslie owned and occupied, and was dismissed after a useful ministry of twenty-four years. He settled the next year in West Newbury, where a shock of palsy terminated his labors. He died at Framingham in 1824. Rev. Ezekiel Dow was the next pastor. He was born in Warren, N. H., where he now resides. He was installed Christmas, 1860, and he closed his pastorate in 1866. Mr. Dow's successor, 1866-1871, was Rev. Alvah M. Richardson, a

native of Woburn, a graduate of Amherst and Andover, a good, worthy and pious man, but an unsuccessful preacher. Rev. Benjamin Howe, our present pastor, succeeded him. Mr. Howe is a native of Linebrook; he fitted for college at Meriden, N. H., Academy, graduated at Amherst College, and at Hartford, Conn., Seminary. He is a worthy citizen, is generous and charitable, a good and diligent student, a faithful and fairly successful preacher, a pious man. The infirmities of age have unfitted him for parochial duties, except on occasions, and he has retired to his farm in Hudson, N. H. *Serus in cœlum redeas.*

There have been stated supplies by the Rev. Messrs. David Tullar, Moses Welch, J. W. Shepard, Eliphalet Burchard, E. E. Abbott and J. W. Healy, now Doctor of Divinity and President of Sierra Madre College, Pasadena, California, and others, whose labors have been blessed with fruitful harvests.

The internal life of the church has been an average harmony. Her worldly goods and favors have been scanty, yet in moral worth and religious fervor she has kept abreast of her sisters. The Master of the Vineyard has evidently been lovingly watchful of his own, as attested by his Spirit. The membership now is forty-nine, about forty of whom are residents.

Through all these years the church has been a power for good; and no well-minded, thoughtful parishioner, who loves his own, who cherishes his neighbor, who seeks good society, who would purify social life, who would help to elevate the moral standard, would throw wholesome influences about his children, and so make his own name redolent with praise,—will stand complacently by and see the old society need any good thing.

## A DAY IN GROVELAND, WEDNESDAY, AUGUST 15, 1883.

THE meeting this day was held by invitation of the Groveland Flower Mission, and was one of much enjoyment.

It was attended by a good delegation from Salem, and in the afternoon by many representative citizens of the immediate neighborhood. At the station, on the arrival of the morning train, was a committee who kindly guided the visitors to the places of interest.

Some passed the forenoon exploring the fields along Johnson's Creek, above the Boston and Maine Railroad Station and Palmer's Creek, which finds its way to the river, a short distance below Balch's Grove, in quest of plants, a good collection of which was made for the afternoon session.

Among those who visited the "Great Rock" was Mr. Alfred Osgood of Newburyport, who says it is a boulder of apparently fifteen tons, resting upon three smaller stones; it is of diorite, the prevailing rock of this vicinity, which consists of feldspar and hornblende. Those who did not join the excursionists went to Balch's Grove, the place for the meeting, which is a very attractive spot, bordering on the Merrimac River. It is extensive in area, and is made up of some open level land and a hill which extends, we should judge, almost or quite half a mile in the direction of the Groveland bridge. The eastern termination of this hill rises from the river's pathway as a steep bluff, and from the cleared space at the summit a very fine river-view may be obtained, which includes the hills and wooded banks opposite, the river below until it winds out of sight and the flourishing city

of Haverhill above. Steamers and tug boats were from time to time seen going up and down the river, and an occasional sail or row boat contributed to the attractiveness of this beautiful, historic and very important industrial stream.

The lunch was served on the grounds, and our hosts showed great hospitality in their courteous and kind attentions.

The afternoon session was held in the pavilion at 2.30 P. M. The President made a few preliminary remarks, in which he spoke of previous visits of the Institute to Groveland, the first being in 1837, when they were received in the Academy Hall, Rev. Dr. Perry and preceptor Morse being much interested in the work of the Institute. Another visit was in 1872, the meeting being in the new Academy Hall.

Miss HARRIET E. PAINE, the President of the Groveland Flower Mission, was then introduced, who gave a very interesting account of the botanical rambles, showing a variety of plants gathered, some of which are not found in the surrounding towns, and others which are rare, comprising in all some seventy-six species. She subsequently read a list of some of the plants to be found in Groveland which are not mentioned by Mr. Robinson in his "Flora of Essex County."

In the course of her remarks she alluded to the fact of occasionally finding plants not previously noticed; the seeds, from which they germinated, were probably brought down in the waste from the mills above. A partial list of the plants above alluded to is hereto appended.

HON. GEORGE B. LORING, U. S. Commissioner of Agriculture, was introduced to speak upon the subject of

"Forestry," which had just been engaging his attention at the west. Before proceeding to that subject, however, he spoke a pleasant word for the fidelity of Mr. W. P. Conant, an associate member of the Institute who is doing faithful work in the Agricultural Department at Washington in the collection and classification of the grasses. He spoke of the Merrimac River and its associations with matters of history, and of the vast importance of its many and varied industries at Manchester, Lowell, Lawrence and other places, contrasting them with the woollen industry by hand process of the olden time.

After briefly alluding to the leather and other industries, he then spoke of the lumbering business and its growth within the past fifty or sixty years; formerly it was considered as being identified exclusively with Bangor. The activity of the woodman in destroying our forests is raising the question of the future supply. If it continues at the rate it has been going on in Maine, the supply will be exhausted in eight or ten years. In Michigan, Wisconsin, and other western states, it will be but a few years before similar results will follow. But in Texas, rating from the past it would take 250 years to exhaust the supply, and in South Carolina 150 years. While lumbering is disappearing along the northern belt, there is a belt of lumber standing along the Gulf States. The south now wants the activity and energy of New England, and this will be one of the stepping-stones by which this section will become prosperous and enterprising. While these remarks had more particular reference to pine, he spoke also of ornamental woods. At St. Paul's he had been presented with a gavel made of hickory, which was very handsome. Of all the many and various woods in the collection at Washington there were none



that would compare with the beauty of some of the southern pines or that of the ornamental woods in which the country abounds. Dr. Loring spoke of the importance of impressing upon the public mind the necessity of preserving our woods. This can be done by taking the same care of the cut woodlots that is taken of the cornfield. The woodland should be protected the same as any other land. Pine wood will make a growth in twenty years; oaks and hard woods, as a rule, in about forty-two years. Wherever a man goes trees follow him. Trees will grow anywhere and will grow plentifully. It is only necessary that the ground should be cultivated. Many trees are not to be transplanted, but planted; those that are indigenous to the soil do best. He said this might seem to be a small question by the side of the great crops of the country, but it was one of great importance.

Hon. N. A. HORTON, of Salem, presented a few brief sketches from the history of Groveland. He spoke of the Old Parish Church, organized June 7, 1727. The first occupant of its pulpit was the Rev. William Balch; he died Jan'y 12, 1792. His successor was the Rev. Ebenezer Dutch ordained colleague-pastor Nov. 17, 1779; who died Aug. 4, 1813, at the age of sixty-two. He was followed by Rev. Gardner Braman Perry,<sup>1</sup> who died Dec. 16, 1859, having been in the active service of the ministry over thirty-six years.

Rev. Mr. Perry is represented as a man of more than ordinary ability as a preacher, and stood high in his denomination. He appeared to have that faculty of discreetness which was capable of giving a strong moral sup-

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<sup>1</sup> REV. GARDNER BRAMAN PERRY, D. D., son of Nathan and Phebe (Braman) Perry, born at Norton, Mass., Aug. 9, 1783; gr. Union College, 1804; ordained Sept. 28, 1814. See Bulletin Essex Inst., Vol. IV, 106.

port to the reforms of the times without the misfortune of antagonizing any party. He was a promoter of temperance reformation and a sympathizer with the anti-slavery cause. He was a man of much public spirit and was interested in the promotion of works to benefit the town and the public.

Mr. Horton then spoke of the late Dr. Jeremiah Spofford,<sup>2</sup> who died in this place a few years ago, at an advanced age. He alluded to him as a man whose opinions were always strong and decided, and a fair type of that old-fashioned citizenship which constituted the best life of New England, and to the influence of which this state and country must look for prosperity and permanence in the future. He then proceeded to read, with here and there a passing comment, a dozen short extracts from an address delivered by Dr. Spofford in the First Church, Groveland, June 22, 1867. It was published at that time in a pamphlet entitled "Reminiscences of Seventy Years, including Half a Century in the Practice of Medicine in this Place." It was a mixture of autobiography and town history.

After some remarks from Dr. LORING and Dr. GEORGE COGSWELL, of Bradford, in reference to Rev. Dr. Perry and Dr. Jeremiah Spofford, and the passing of a vote of thanks to the Flower Mission of Groveland, and to Mr. Balch, the proprietor of the grove, for courtesies extended during this pleasant visit to Groveland, the meeting adjourned.

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<sup>2</sup> JEREMIAH SPOFFORD, son of Jeremiah and Temperance Spofford, born at New Rowley (Georgetown), Dec. 8, 1787, removed to East Bradford (Groveland), in 1817, died Sept. 16, 1880. See *Bulletin Essex Inst.*, Vol. IV, 108.

PLANTS SHOWN AT THE MEETING IN GROVELAND, MASS.,  
AUGUST, 1883

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BY MISS HARRIET E. PAINE.

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- Ranunculus Flammula*, var. *reptans* (Creeping Spearwort).  
*Actea rubra* } fruit (Red Baneberry).  
" *alba* } (White Baneberry).  
*Hypericum ellipticum* (St. John'swort).  
" *corymbosum* (Common St. John'swort).  
" *mutillum*.  
*Ceanothus Americanus* (fruit); a plant from which tea was made during the Revolution). (New Jersey Tea).  
*Desmodium Canadense*.  
*Lythrum Salicaria* (Spiked Loosestrife).  
*Cicuta bulbifera* (Cowbane).  
*Sium lineare* (Water Parsnip).  
*Liatris scariosa* (Blazing Star).  
*Solidago latifolia*.  
" *lanceolata*.  
*Krigia Virginica* (Dwarf Dandelion).  
*Hieracium Canadense*.  
" *venosum* (Rattlesnake Weed).  
*Lobelia Cardinalis* (Cardinal Flower).  
*Campanula rotundifolia* (Harebell).  
*Lysimachia ciliata*.  
*Mimulus ringens* (Monkey Flower).  
*Gratiola aurea*.  
*Scutellaria lateriflora* (Mad-dog Skullcap).  
*Cuscuta Gronovii* (Dodder).  
*Laportea Canadensis* (Wood-nettle).  
*Carya alba* (fruit) (Shagbark Hickory).  
*Peltandra Virginica* (fruit) (Arrow Arum).  
*Goodyera repens*.  
*Dulichium spathaceum*.  
*Zizania aquatica* (Indian Rice).  
*Spartina cynosuroides* (Salt Marsh Grass).  
*Bromus ciliatus*.  
*Andropogon furcatus*.  
" *scoparius*.  
*Equisetum hyemale* (Scouring Rush).  
*Struthiopteris Germanica* (Ostrich Fern).  
*Cystopteris fragilis*, var. *dentata*.  
*Buxbaumia aphylla*.

GROVELAND PLANTS NOT REPORTED BY MR. ROBINSON IN  
COUNTY FLORA.

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BY MISS HARRIET E. PAINE.

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*Lythrum alatum*, a few blossoms near a creek flowing from a woollen factory.

*Penstemon Digitalis*, found in several places, one of them an old field where it could not have been introduced with western grain.

*Trillium album* and *Trillium declinatum*, in a rich meadow where all the intermediate steps between *T. cernuum* and *T. erectum* may be found, some of the plants also varying in the direction of *T. sessile* and *T. erythrocarpum*. In the same meadow has been found one plant of a *Salix* which has not yet been identified by any of the four or five botanists who have seen it. It was not more than one or two feet in height, and further search in the meadow has failed to discover any trace of more.

*Allium Schœnoprasum*.

*Buxbaumia aphylla*.

*Fegatella conica*.

The above were mentioned at the Institute, with the exception of the Willow. Since then, the following have been added to the list, as well as many *varieties* of plants, particularly of lichens.

*Sanicula Canadensis*.

*Houstonia purpurea*, a var.

*Solidago gigantea*.

*Bidens cernua*.

*Penstemon pubescens*.

*Rumex glomeratus*.

*Pertusaria multipuncta*.

FIELD DAY AT WEST PEABODY, WEDNESDAY,  
SEPT. 19, 1883.

By invitation of the West Peabody Farmers' Club, a meeting was held this day at the Schoolhouse Hall in West Peabody. The members of the Institute and their friends began to assemble at 10 A. M., and were cordially received by a committee of the Farmers' Club, consisting of the President, Mr. Taylor, and Messrs. Upham, Henderson, Viles and Farwell. The company was divided into excursion parties, and under the direction of members of the Club visited several places of interest in the fields and woods. The farms of Messrs. Henry Saltonstall, Francis H. Appleton, William P. Upham and Joseph Henderson were visited, and every facility was extended to examine these well laid-out grounds, extensive barns filled with hay and other crops, fine breeds of stock, and the various new and improved implements used in the general management of the farm.

These are in striking contrast with the system adopted and the means employed in carrying on large farms some fifty years ago. Similar improvements are perceptible in all the other industries of this county. The agricultural keeps pace with the mechanical, the commercial and manufacturing.

A botanical ramble was organized under the direction of Mr. John H. Sears, and many places of interest were visited.

At one o'clock the various parties reassembled for lunch, and at an hour and a half later the afternoon session was held.

The PRESIDENT in the chair. After a few introductory remarks, he called upon Mr. JOHN H. SEARS who gave, in a very pleasant manner, the results of the botanical ramble

showing a variety of plants which were collected. Many of the species were those that are usually found at this season in similar localities in this vicinity: others were rarities of considerable interest. He spoke of the *Gentiana crinita* (Fringed Gentian), *Veronica americana* (Brook Lime), *Parnassia caroliniana* (Grass of Parnassus) and of some of the species of Solidago and Asters. In a small pond near the residence of W. P. Upham, Esq., he collected specimens of *Polygonum amphibium*.

Mr. GEORGE DIXON, an English gentleman now residing in Virginia, spoke of the English grasses and of the English sparrow. He is of the opinion that we shall find this sparrow to prove troublesome ere long.

Mr. WILLIAM P. UPHAM read a paper giving an account of the early settlements in West Peabody, the bounds and landmarks of many of the farms and estates and the traditions relating thereto that have come down in the old families. This paper was referred to the publication committee, and will appear in the Historical Collections.

Messrs. James F. Ingraham, Willard Spalding, James P. King, Joseph Henderson, all of West Peabody, Woodbury P. Conant, of the U. S. Agricultural Department, and J. S. Kingsley made appropriate and interesting remarks.

The Secretary offered the following vote which was unanimously adopted.

*Voted*, That the thanks of the Essex Institute are due and are hereby tendered to Messrs. Harrison Taylor, W. P. Upham, Bowman Viles, James P. King, John E. Hedrick, Joseph Henderson, Edwin C. Farwell and other members of the West Peabody Farmers' Club, for the many kind attentions tendered during the day; also to the town authorities for the use of the schoolhouse for the purposes of the meeting. Adjourned.

## REMARKS UPON SOME CHIPPED STONE IMPLEMENTS.

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BY F. W. PUTNAM.

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*(Communicated at the meeting on June 29, 1883.)*

Vice-President PUTNAM addressed the meeting on the subject of "American Archæology." After a general statement of the importance of studying the works of man in the past, not only in order to obtain an insight into the condition and development of the early races, but also, by comparison, to trace their connections and migrations over the world, he confined his remarks to the method of manufacture, the character and use of chipped stone implements. The subject was illustrated by several photographs and drawings which he brought from the Museum at Cambridge, and by the local collection exhibited to the meeting by Mr. Dodge.

The first cutting implements used by man, to supplement his finger nails and teeth, probably consisted of pieces of stone, broken shells, the teeth of animals and splinters of bone or wood, according to the particular circumstances and surroundings of the individual. While such natural and primitive implements are still in use by the lower savages, and in emergencies are resorted to by us all, the natural wisdom of man, as shown by his great inventive power in his onward march, soon led him to prepare implements better adapted to his purposes. Thus, among the very oldest works of man, of which we have positive knowledge, are the chipped stone imple-

ments found at greater or less depth in the gravel beds of various parts of the world ; such as those discovered by Dr. Abbott in the gravel of the Delaware valley at Trenton, N. J., of which figs. 1 and 2 are representations.

Implements such as these were made readily from any kind of stone which fractures with a sharp edge, and they were formed by striking off pieces with another stone which served as a hammer. In each locality the stones which have this essential character soon became known and hence we find that chipped implements made of the several varieties of slate, jasper and quartz are abundant in this vicinity, while in other parts of America flint or chert, obsidian, chalcedony and other kinds of stones were used.

A variety of argillite was the material in common use among the people inhabiting the valley of the Delaware at a time so remote that we are unable, as yet, to express it in years. While we cannot affirm that the rudely-made implements found in the Trenton gravel were fastened to handles, it is probable that they were, as we know that similar implements are furnished with handles by savages probably as low in the scale of humanity as were the ancient men of the glacial epoch. Figures 1 and 2 represent two of the argillite implements from the Trenton gravel.

Fig. 3 is an illustration of a rude stone implement provided with a handle, from Tasmania. The handle is simply a tough twig which has been cut or scraped flat on one side and then bent over the stone ; the flat surfaces of the twig coming together below the stone are secured in place by a string and form a rounded handle. A similar method may have been followed in hafting the rude implements found in the gravel.

Another primitive form of cutting implement is shown



in fig. 4. This is from Australia, and was made by fastening sharp fragments or flakes of stone to a stick by means of a tenacious gum. It is a good illustration of the manner in which flint and other flakes may have been mounted for use as saw-like knives by North American tribes. The original of this figure is in the collection of the Peabody Academy of Science, Salem.

Another rude but efficient form of knife is shown in fig. 5. This is simply a large flake of striped gray flint, slightly chipped along two of its edges. It was taken from an Indian grave in southern California, and is described with several others of a similar character in Vol. VII, Report of Lt. Wheeler's survey west of 100th meridian. Fragments of the wooden handle and some of the asphaltum with which it was fastened, are still attached to the base of the stone. Such flint knives without their handles are common, and are often called rude arrowheads or spearpoints, although by most archæologists they are termed flake-knives or trimmed flakes. A flint knife with its wooden handle is shown in fig. 6. This also was from an Indian grave near Santa Barbara, California. Numerous other specimens of this character have been found in graves in southern California. It is seldom the case that the wooden handle is preserved, although the asphaltum with which the blade was fastened to the handle often remains attached to the stone.

In other regions different substances were used for securing the blade to the handle. Among many interesting objects taken from bundles containing human skeletons,<sup>1</sup> found by Dr. Edward Palmer in the burial caves of Coahuila, Mexico, and now in the Peabody Museum

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<sup>1</sup> See Reports Peabody Museum Arch. and Ethn., Cambridge. Vol. III, p. 233.

at Cambridge, are large, thin and well-chipped points of flint which are fastened to short handles, by means of a tenacious substance probably obtained from the cactus. Representations of seven of these knives from two burial caves are given in figures 7-13, as they form a very interesting addition to our knowledge of at least one of the methods of mounting the large chipped points, and they also show that not all such points were spearheads.

Although large rude implements, like those from the Trenton gravel, were made by simply chipping off pieces so as to leave a rough cutting edge or a point, the delicately flaked knives from the Mexican caves required additional work of a higher character.

The art of making arrowheads and similar objects out of stone is often stated to be one of the lost arts; but this is not the case, since at the present time there are many Indians in this country, who continue to manufacture them, and even work pieces of glass bottles into symmetrical and delicate arrowpoints. The method of making the points has been described several times by eye-witnesses, and although there is a difference in detail according with the material used and the skill of the workman, the manufacture may be described in general terms as follows :

A piece of that particular kind of stone, which experience has shown to be the best attainable for the purpose, is selected and roughly shaped by striking blows with a hammer-stone. If it is found to chip readily, it is shaped still further by light blows along the edges, each blow striking off a chip. Partly wrapped in a piece of skin, it is then held in the left hand and finished by flaking off little bits. This delicate part of the work is done with a flaking tool made usually of a piece of bone or antler. This

is a few inches long and about half an inch wide, having one end rubbed down to a blunt edge, which may be either straight, pointed or notched. The other end is fastened to a piece of wood so as to give a firm support to the hand. Sometimes this wooden handle is long enough to be held under the arm, thus steadying the implement which is grasped by the right hand. The edge of the flaker is pressed firmly against the edge of the stone, then with a slight rotation of the wrist a small flake is thrown from the edge of the stone. It will be found that, with a little practice, this flaking can be done with considerable rapidity and precision. Some stones flake better after being heated. The numerous forms of chipped implements known as scrapers, drills, knives, spearpoints and arrowheads, which are represented in the collection before us, probably were made by a method similar to this which I describe. Presumably the smaller are arrowheads which were mounted in various ways.

A mounted point, which may have been either a heavy arrow or a javelin, is shown in fig. 14. It was found in an ancient grave near Arica, Peru, by Mr. J. H. Blake. The point is of quartz and is held in the socket by the string which passes over the barb and is wound round the end of the wooden shaft. The other end of the wood is so shaped as to lead to the conclusion that it was set into a shaft like the more slender piece which forms part of the arrow shown in fig. 15. Both specimens were found by Mr. Blake in the same grave. The more delicate quartz point of the latter is set in a hole in the end of a piece of hard wood and held fast by gum or pitch. The thread was wound round the wood simply to keep the piece from splitting. This piece was then set in a hollow reed which formed the long shaft of the arrow. This

method of mounting arrowpoints is common in North America. Figs. 16, 17 and 18 represent arrows made by the Navajo and Pah-Ute Indians. In these the points, which are of chalcedony and obsidian, are fastened in a notch at the end of the wood with pitch and a lashing of sinew. The piece of wood is then set in a hollow reed, as shown in fig. 16*a*; the end of the reed being wound with sinew to prevent its splitting. Another mode of mounting is shown in fig. 19. It is an arrow made by the natives of Tierra del Fuego. The point is chipped from a piece of bottle glass, and is fastened directly in a slot at the end of the wooden shaft by binding firmly with a sinew without the aid of any pitch or gum.

FIG. 1.

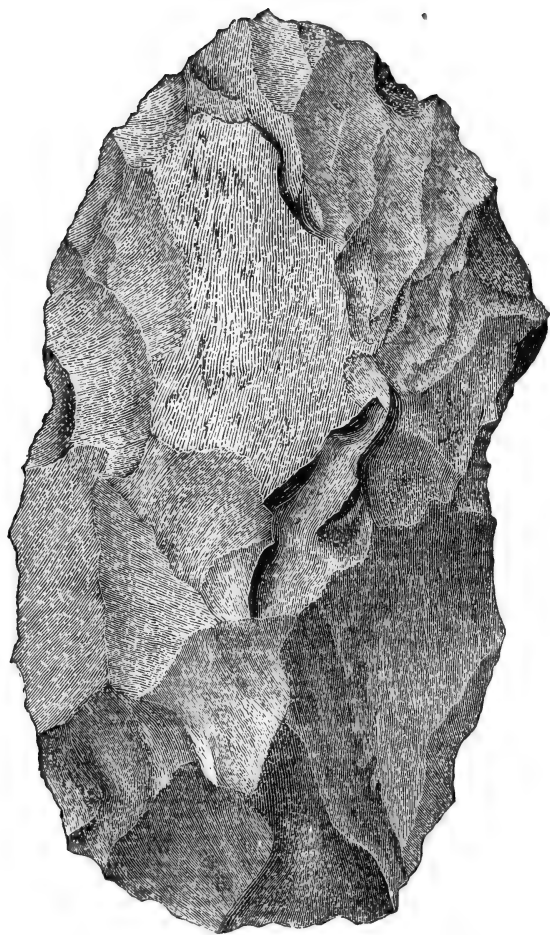


FIG. 1. IMPLEMENT OF ARGILLITE FROM THE TRENTON GRAVEL.  $\frac{1}{1}$

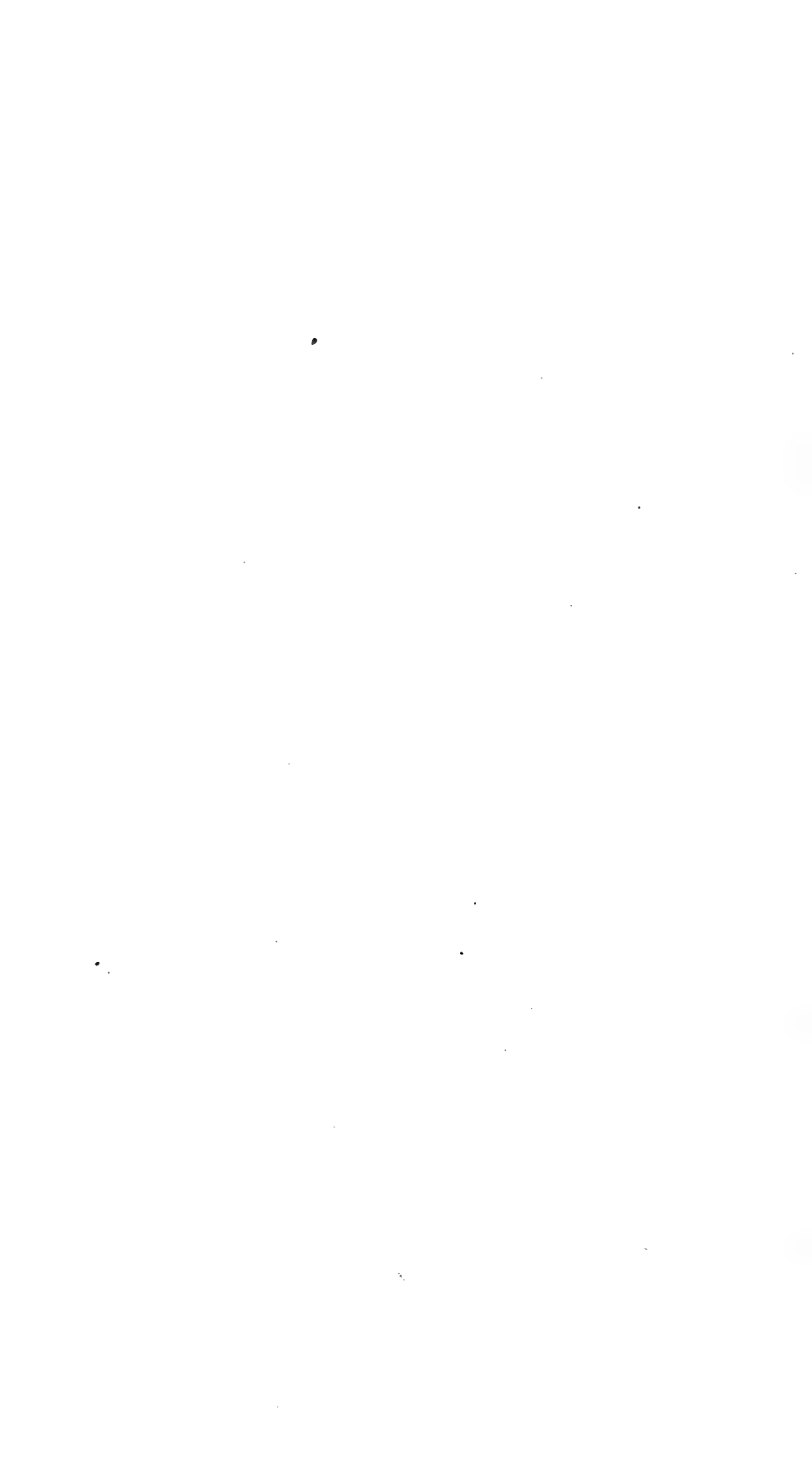


FIG. 2.

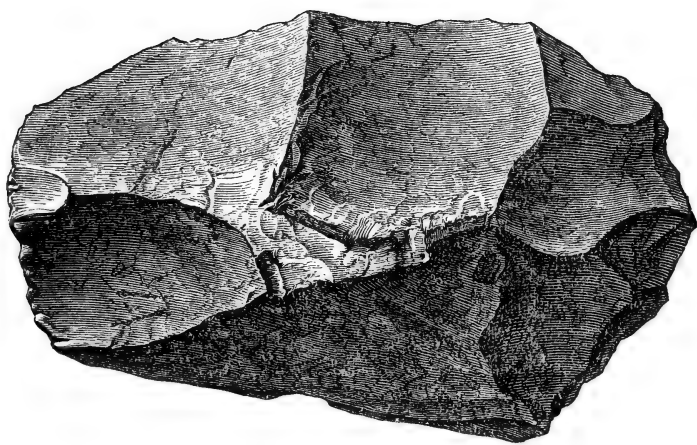
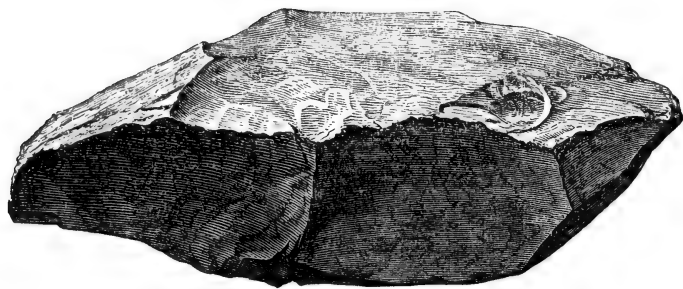


FIG. 2. TWO VIEWS OF AN IMPLEMENT OF ARGILLITE FROM THE TRENTON GRAVEL.  $\frac{1}{1}$





FIG. 3.



FIG. 4.



FIG. 3. RUDE STONE AXE IN A WOODEN HANDLE.  $\frac{1}{3}$  FROM TASMANIA.  
FIG. 4. STONE CHIPS FASTENED BY GUM TO A WOODEN HANDLE.  $\frac{1}{3}$   
FROM AUSTRALIA.



FIG. 6.

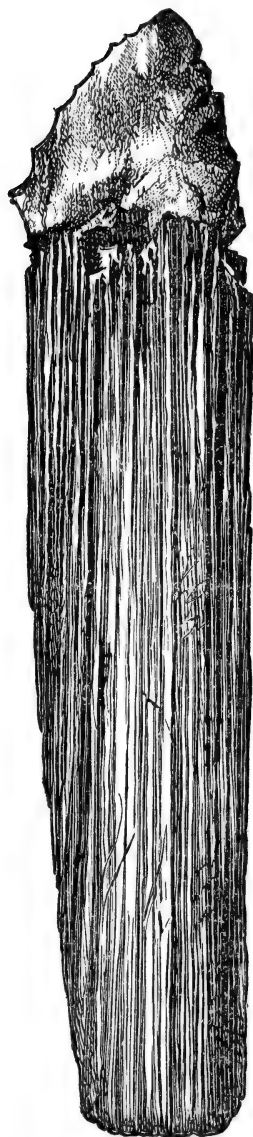


FIG. 5.



FIG. 5. FLAKE KNIFE WITH REMAINS OF WOODEN HANDLE.  $\frac{1}{1}$   
FIG. 6. RUDELY CHIPPED STONE KNIFE IN WOODEN HANDLE.  $\frac{1}{1}$   
FROM GRAVES NEAR SANTA BARBARA, CALIFORNIA.



FIG. 7.

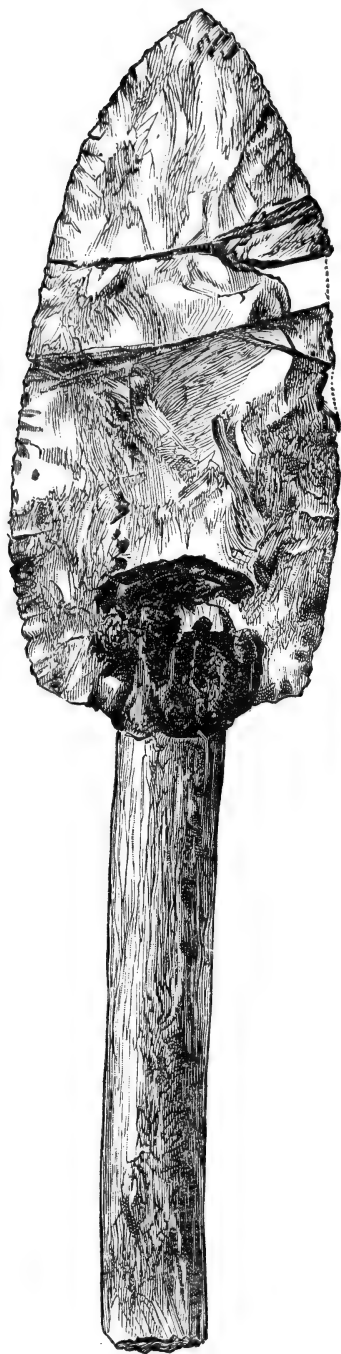
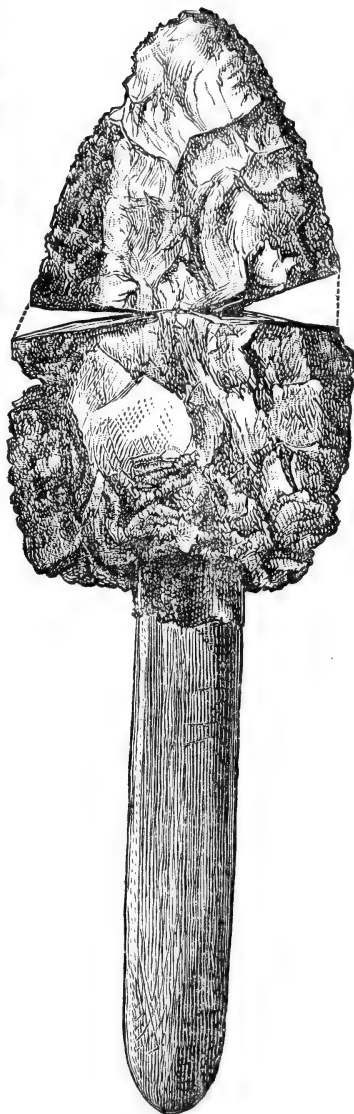


FIG. 8.



FIGS. 7, 8. FLINT KNIVES IN WOODEN HANDLES.  $\frac{1}{2}$   
FROM BURIAL CAVE IN COAHUILA, MEXICO.

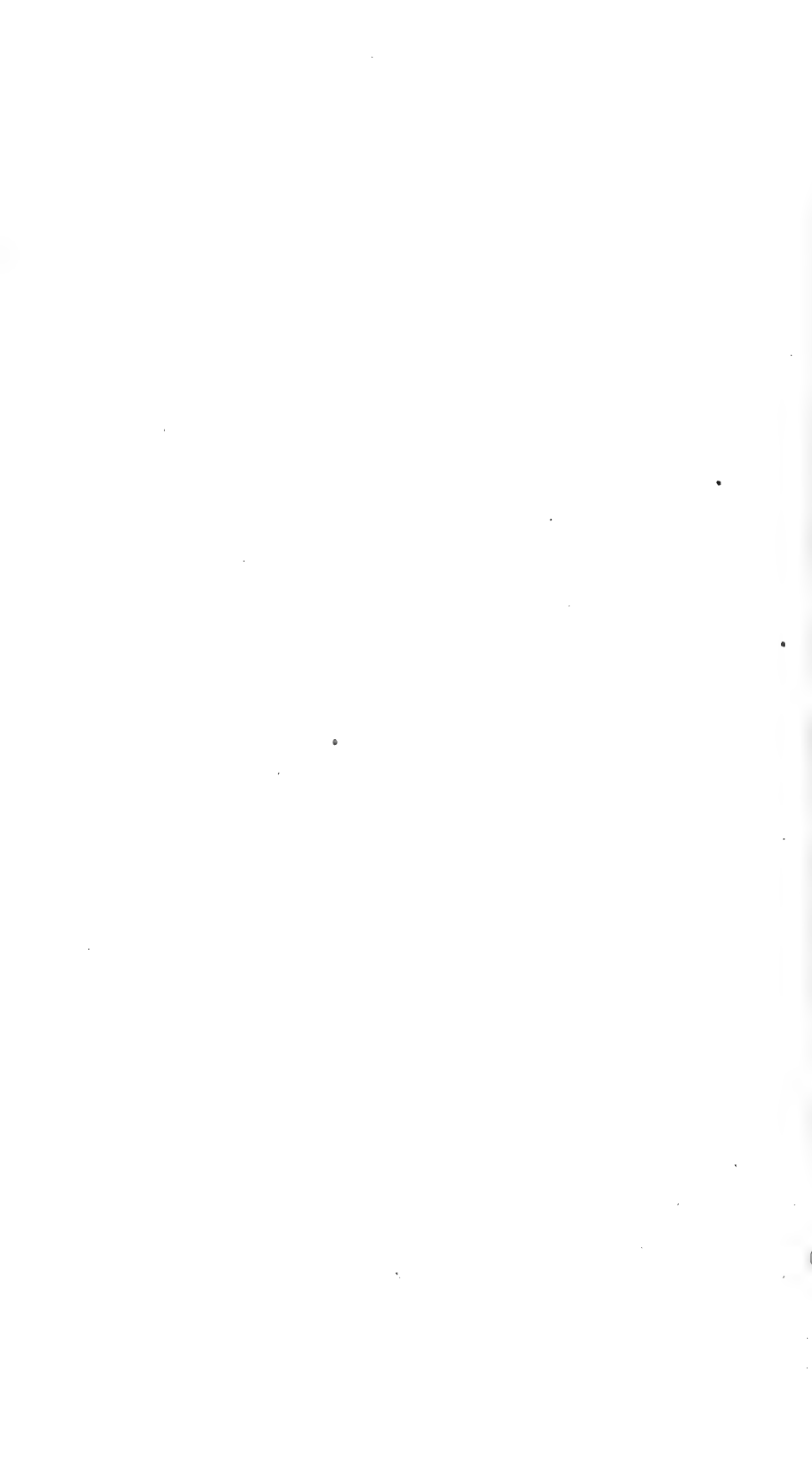


FIG. 9.

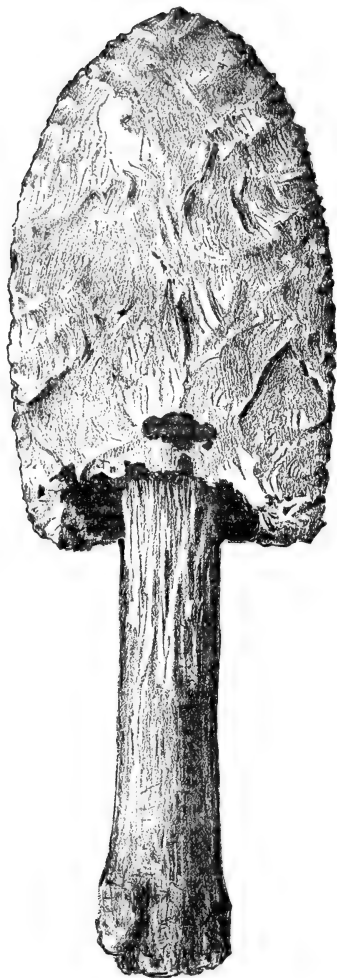


FIG. 10.



FIGS. 9, 10. FLINT KNIVES IN WOODEN HANDLES.  $\frac{1}{2}$   
FROM BURIAL CAVE IN COAHUILA, MEXICO.

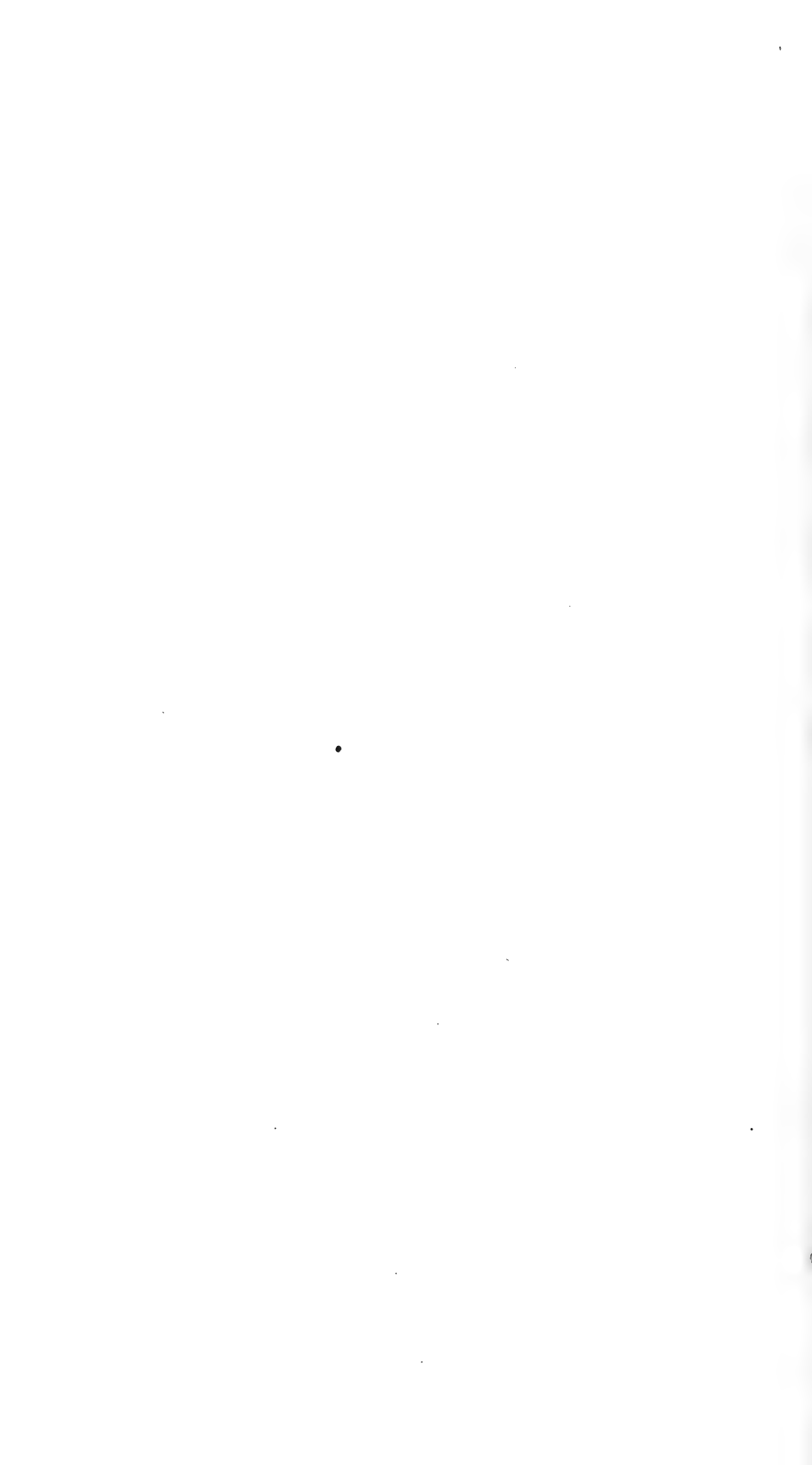




FIG. 11.

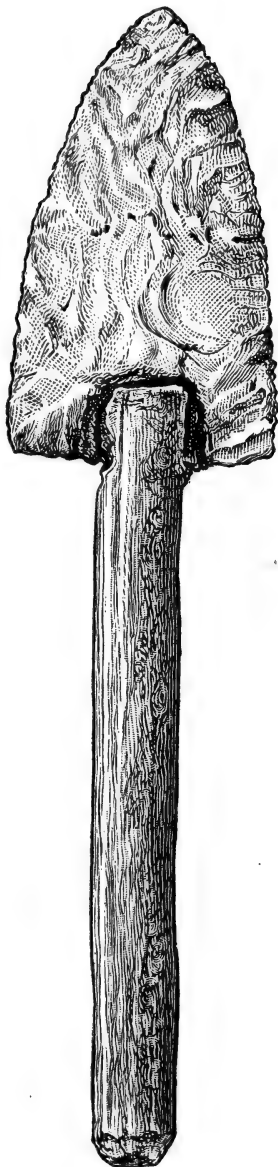
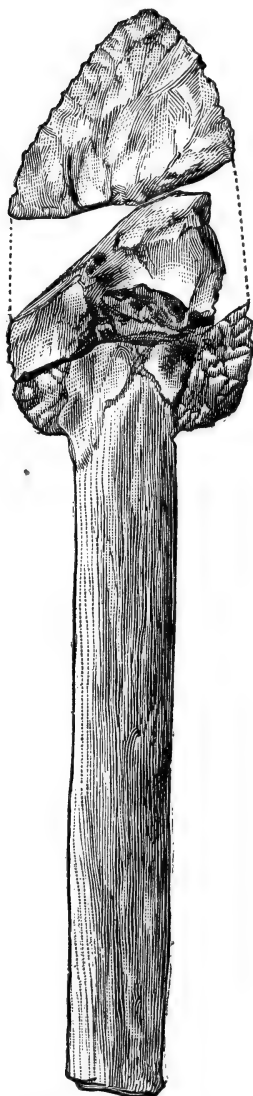


FIG. 12.



FIGS. 11, 12. FLINT KNIVES IN WOODEN HANDLES.  $\frac{1}{2}$   
FROM BURIAL CAVES IN COAHUILA, MEXICO.





FIG. 13.



FIG. 14.



FIG. 15.

FIG. 13. FLINT KNIFE IN WOODEN HANDLE.  $\frac{1}{2}$  FROM CAVE IN COAHUILA, MEX.  
 FIG. 14. QUARTZ POINT IN WOODEN SOCKET.  $\frac{1}{2}$  FROM GRAVE IN ARICA, PERU.  
 FIG. 15. ARROW POINT WITH SHAFT OF WOOD AND REED.  $\frac{1}{2}$  FROM GRAVE IN  
 ARICA, PERU.



FIG. 16a.



FIG. 16.



FIG. 17.

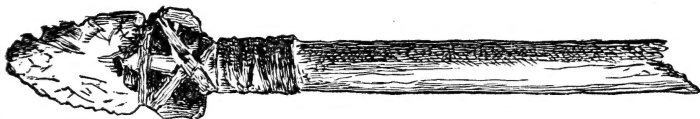


FIG. 18.



FIG. 19.



FIGS. 16-18. NAVAJO AND PAH-UTE ARROWS.  $\frac{1}{2}$  16a, SHOWS JOINING OF THE WOODEN PORTION OF SHAFT WITH THE REED.  
FIG. 19. ARROW FROM TIERRA DEL FUEGO.  $\frac{1}{2}$





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